

FIG. 1

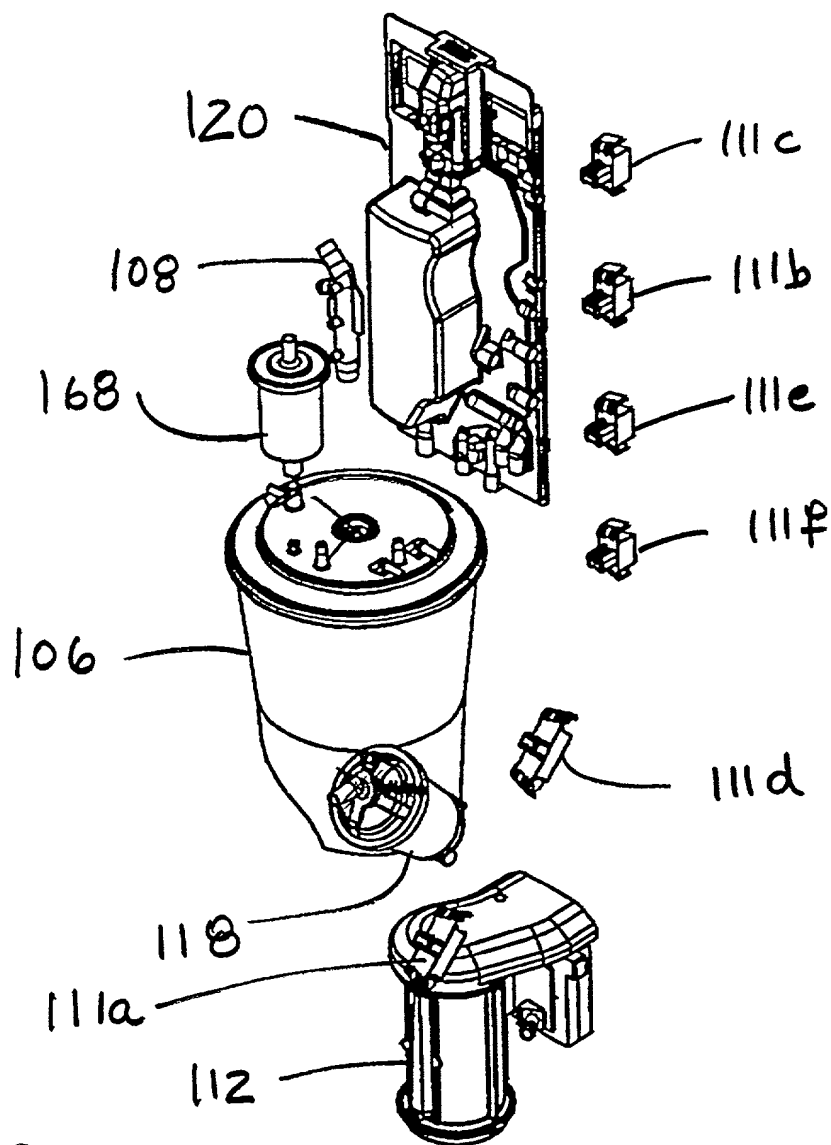


FIG. 2B

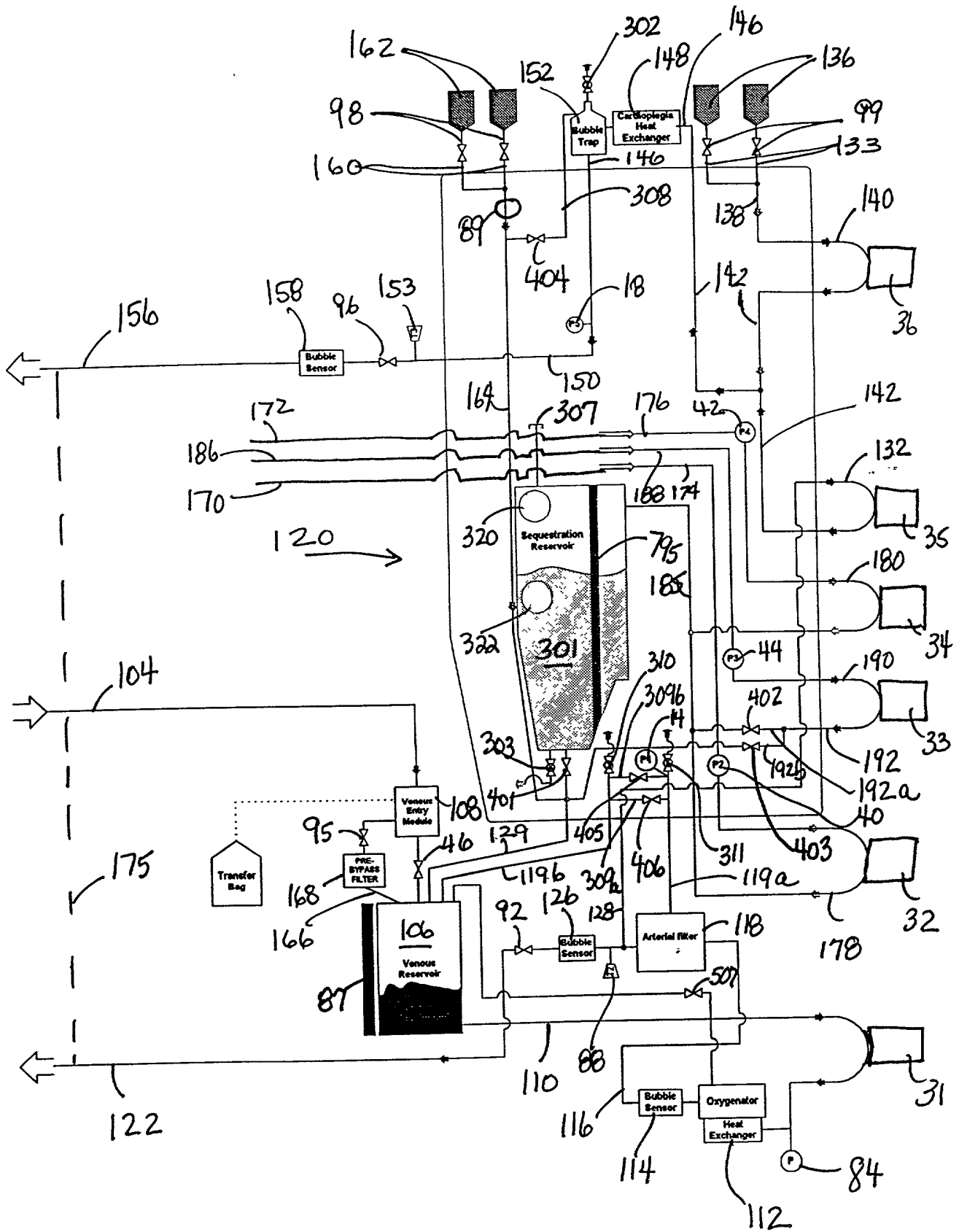


FIG. 3A

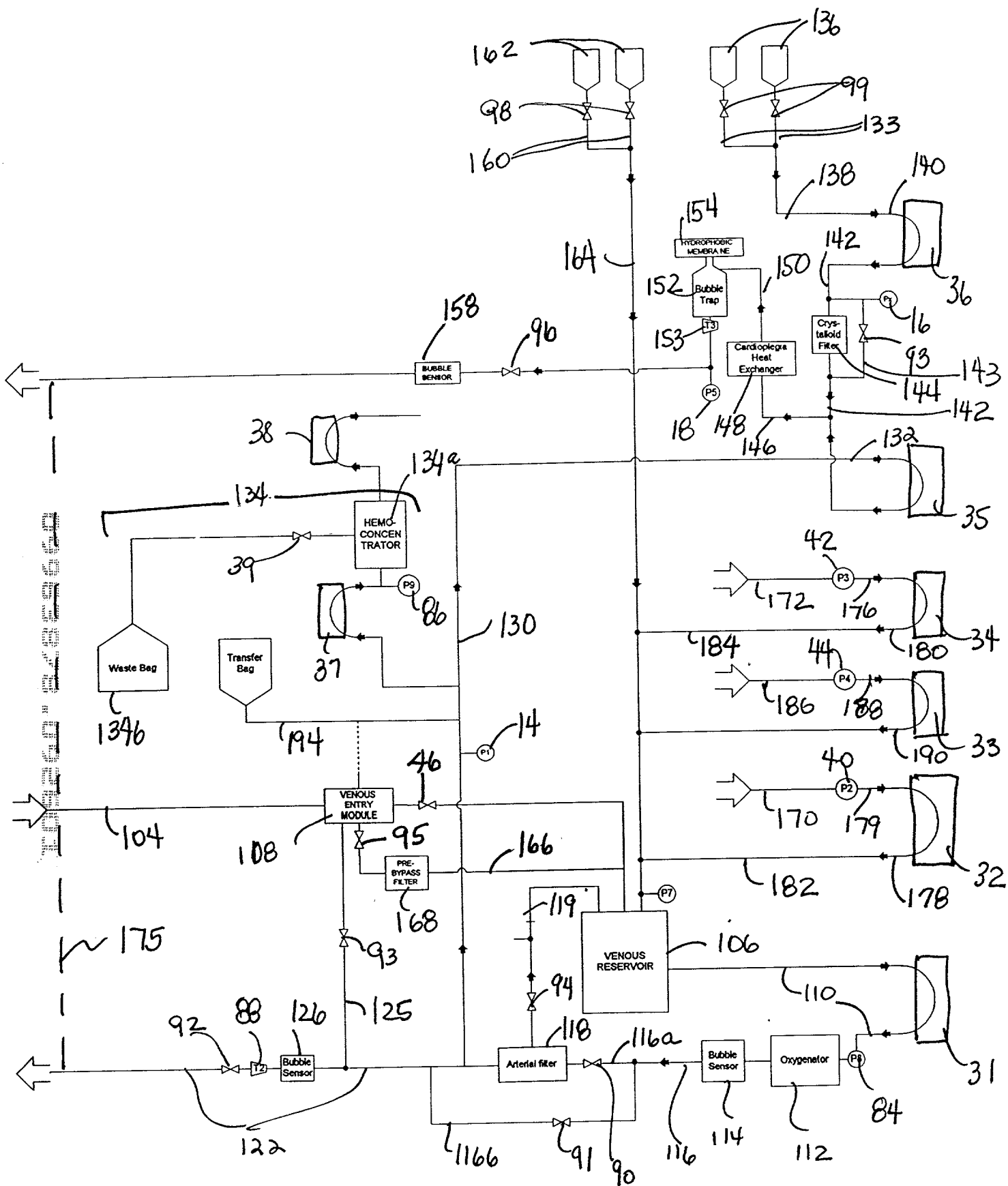
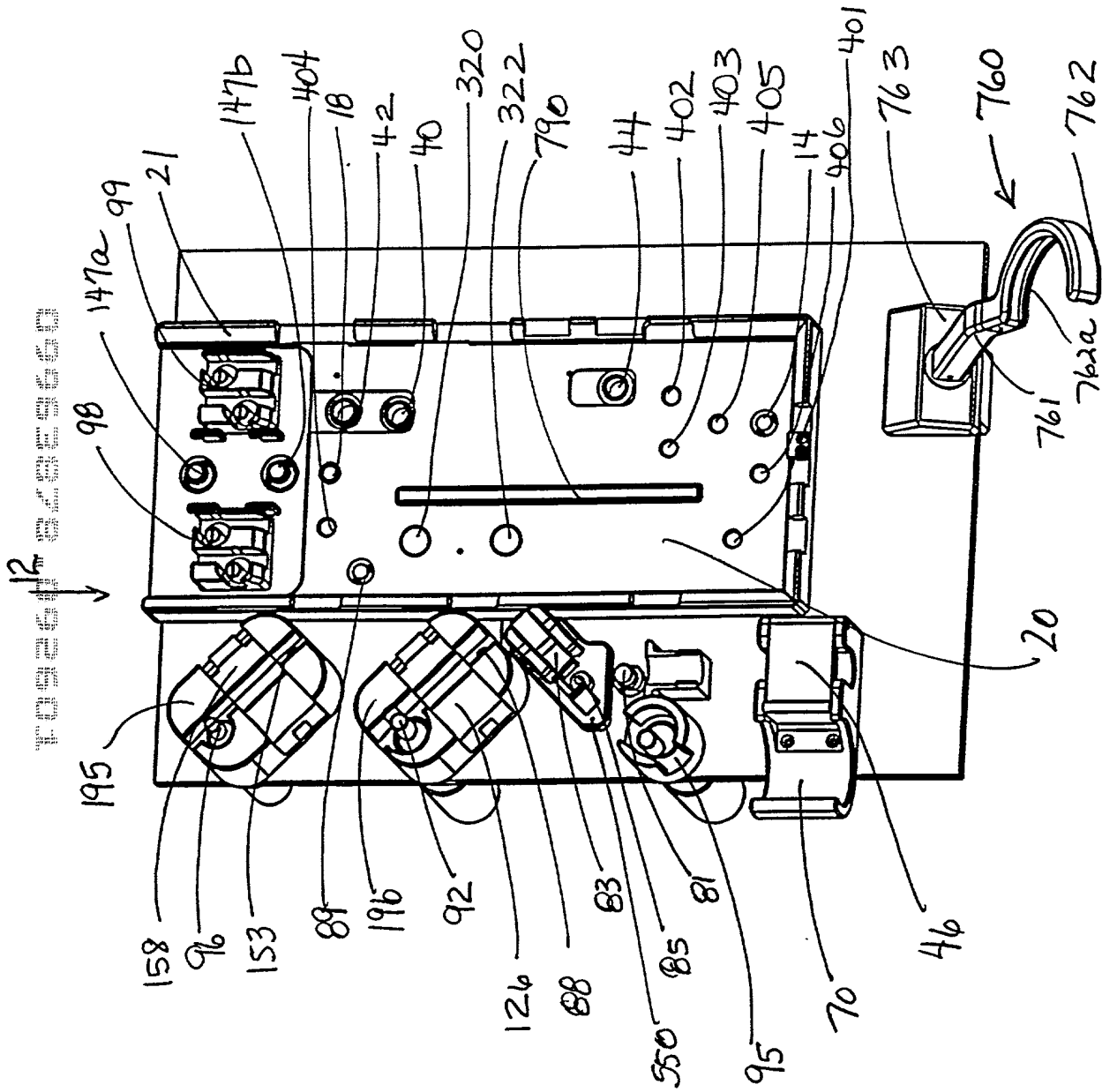


FIG. 3B



F/6.4

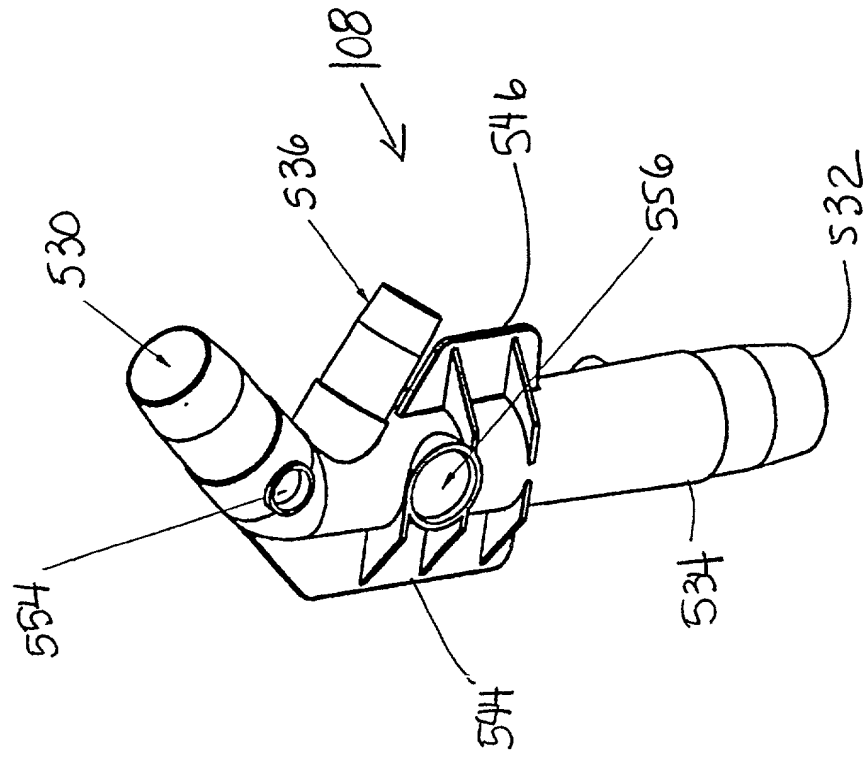


FIG. 5A

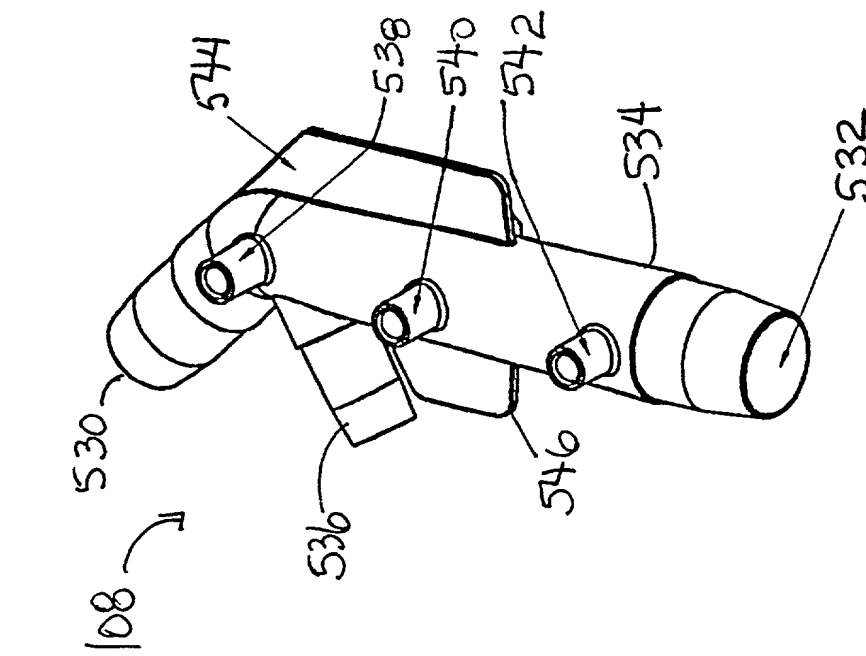


FIG. 5B

FIG. 5D is a perspective view of the microscope assembly 500, showing the base 83, the stage 552, the objective lenses 548, the eyepiece 541, and the camera 539.

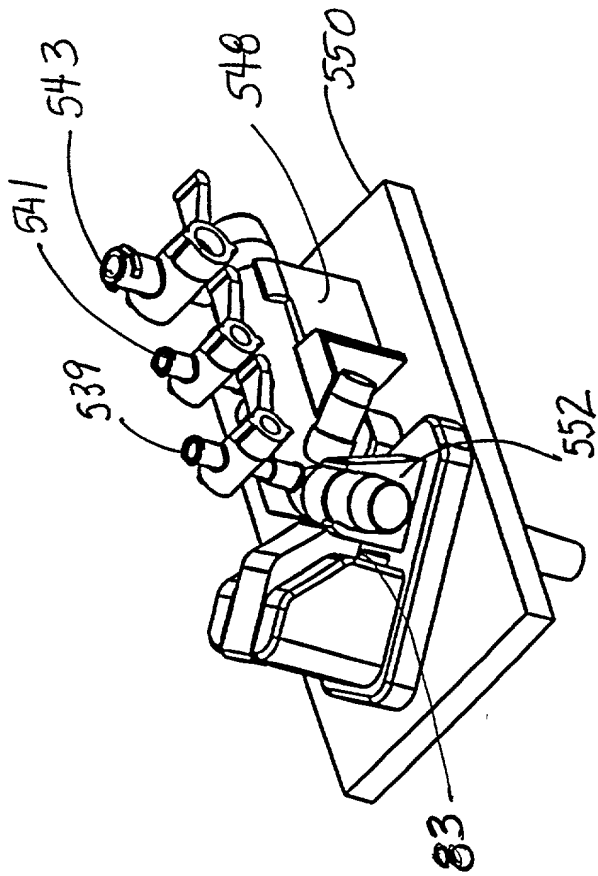


FIG. 5D

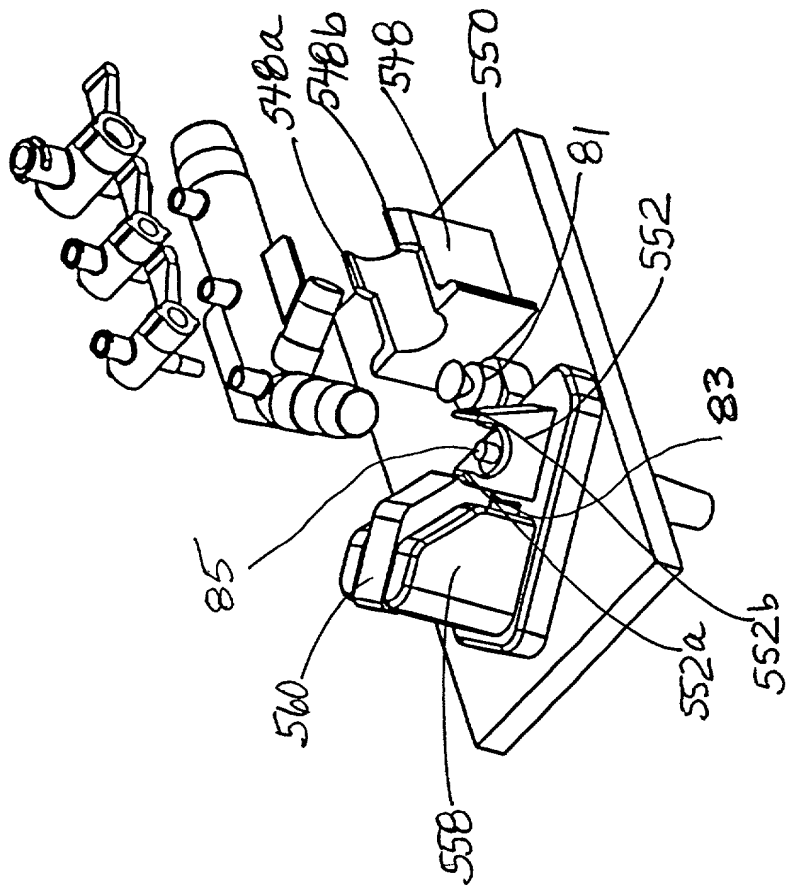


FIG. 5C

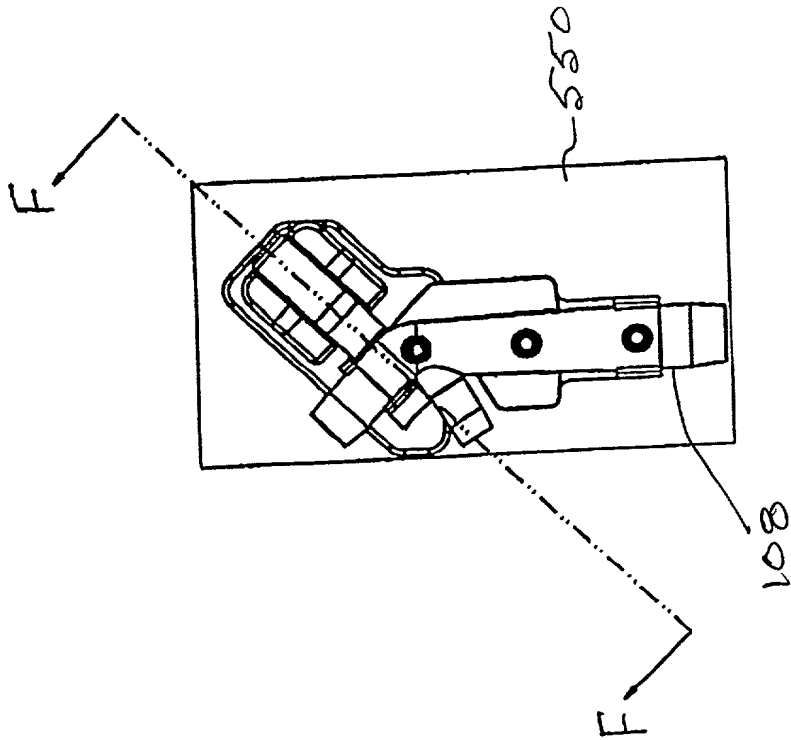


FIG. 5E

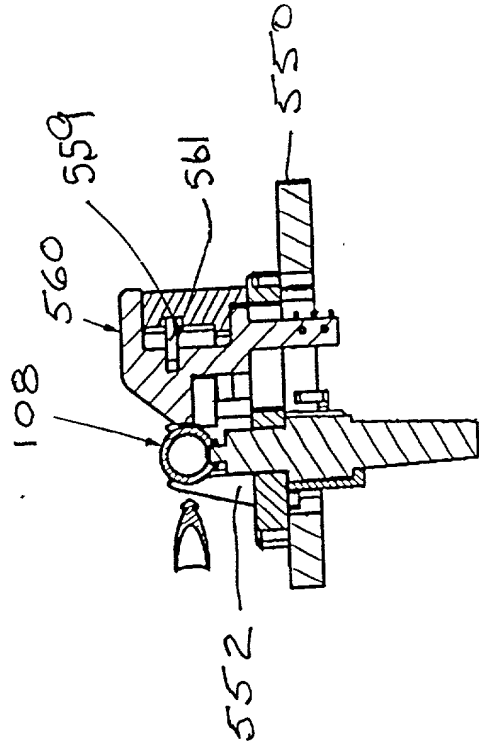


FIG. 5F

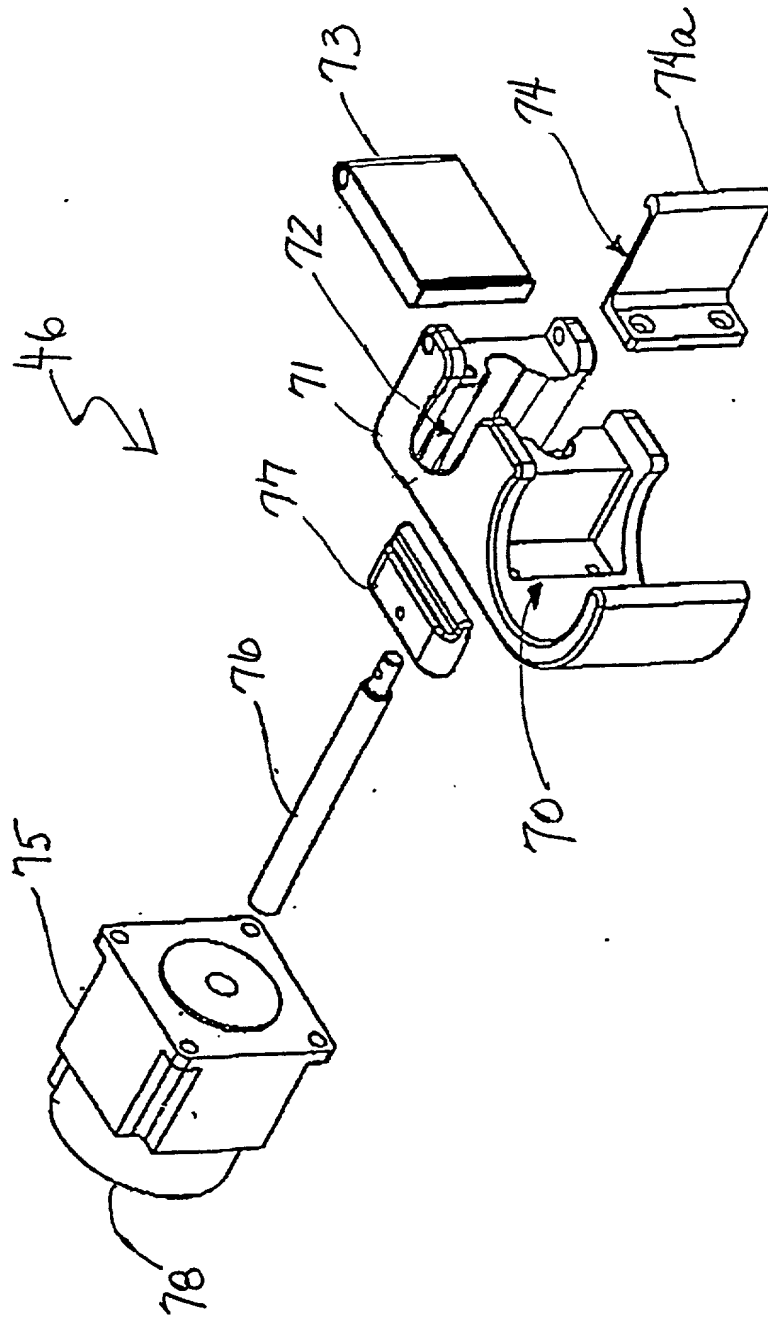


FIG. 6A

FIG. 6B

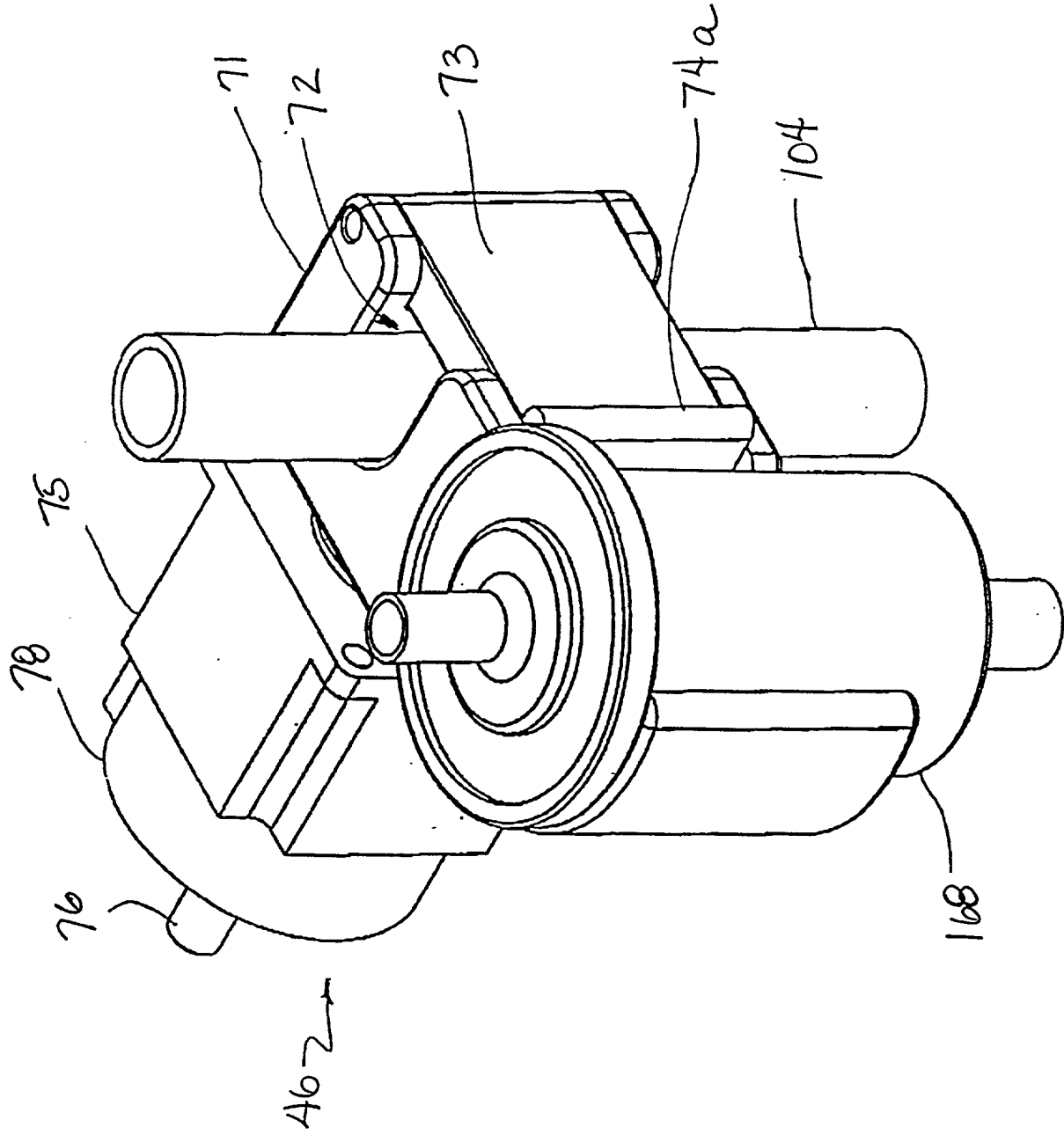


FIG. 6B

FIG. 6C is a cross-sectional view of the device taken along line C-C of FIG. 6A.

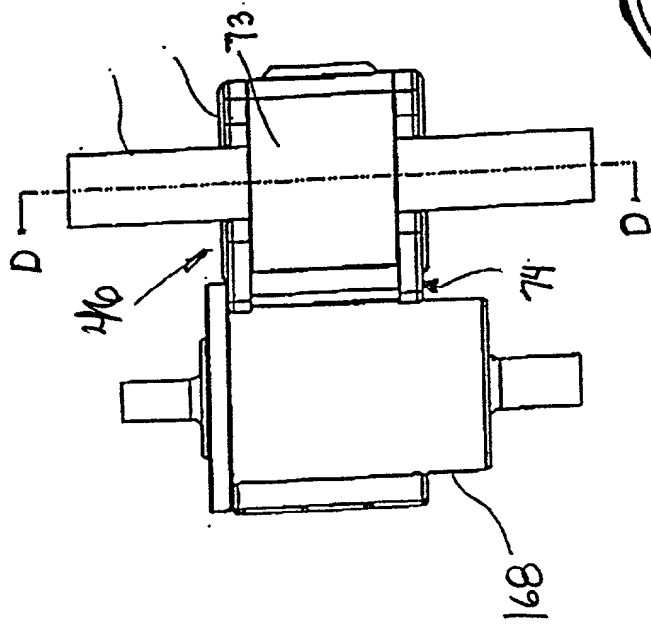


FIG. 6C

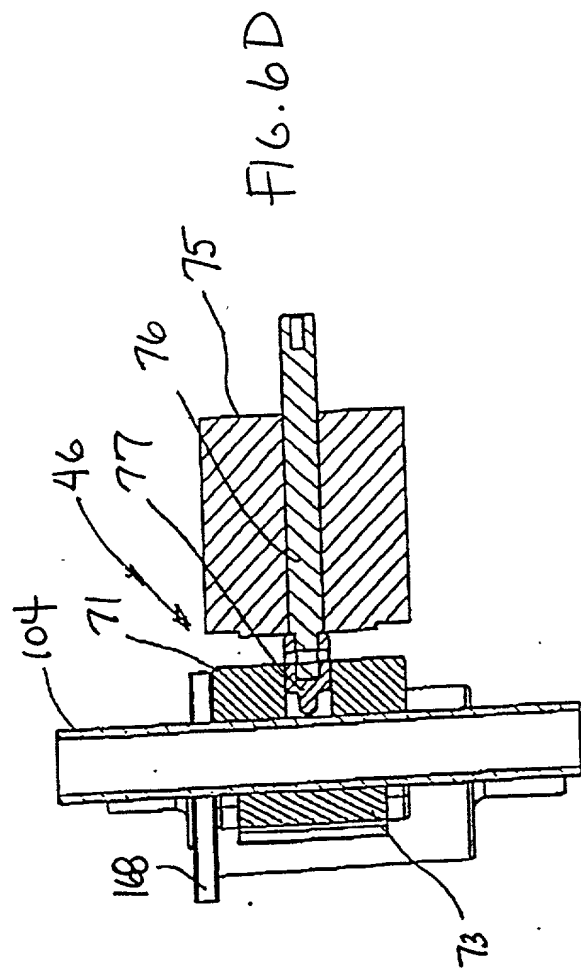


FIG. 6D

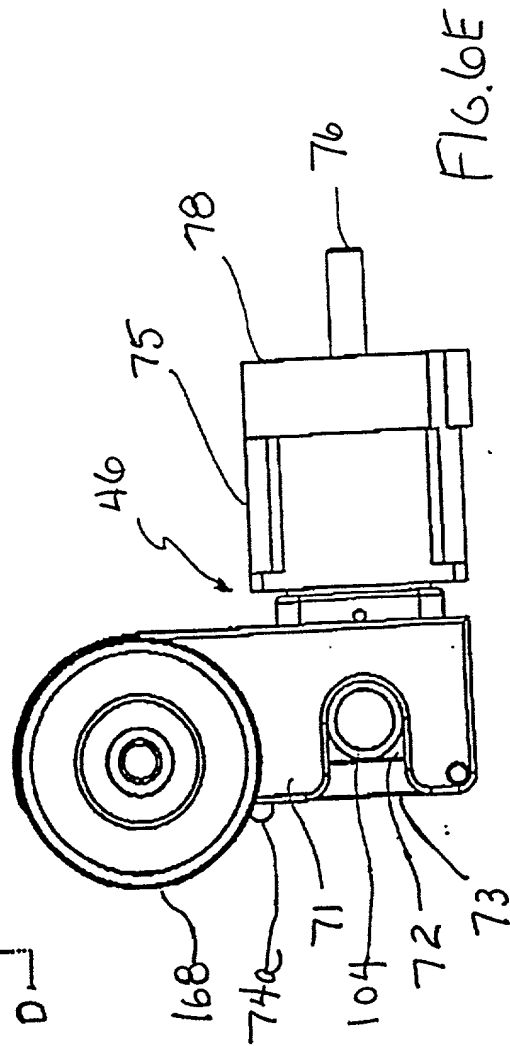


FIG. 6E

FIG. 7A is a perspective view of the device 100 in an open position, showing the housing 106 and the lid 107. The lid 107 is hinged to the housing 106 at the top edge 107a. The lid 107 includes a latch 107b and a handle 107c. The housing 106 includes a base 106a and a side 106b. The base 106a includes a port 106c and a handle 106d. The side 106b includes a handle 106e. The device 100 is shown in an open position, with the lid 107 tilted upwards.

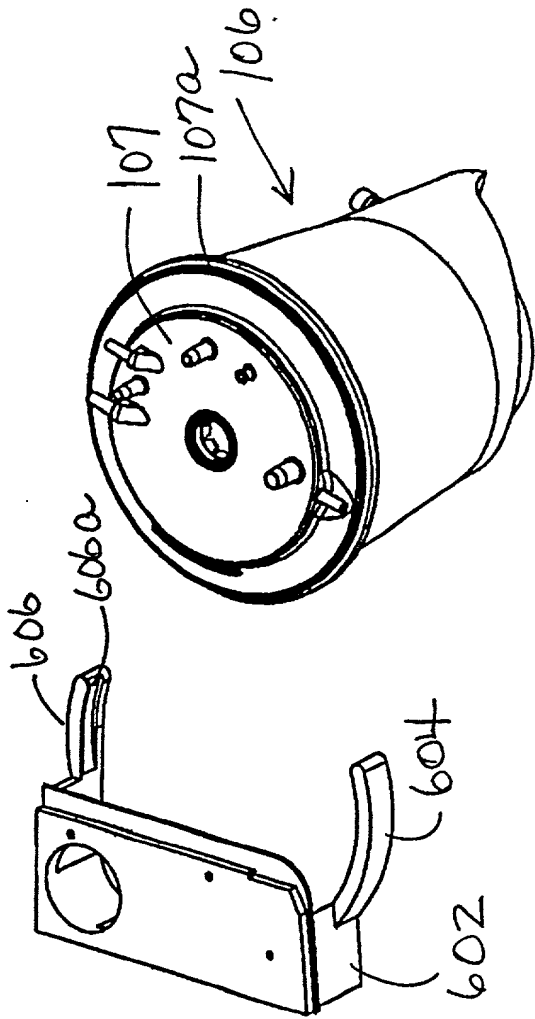


FIG. 7A

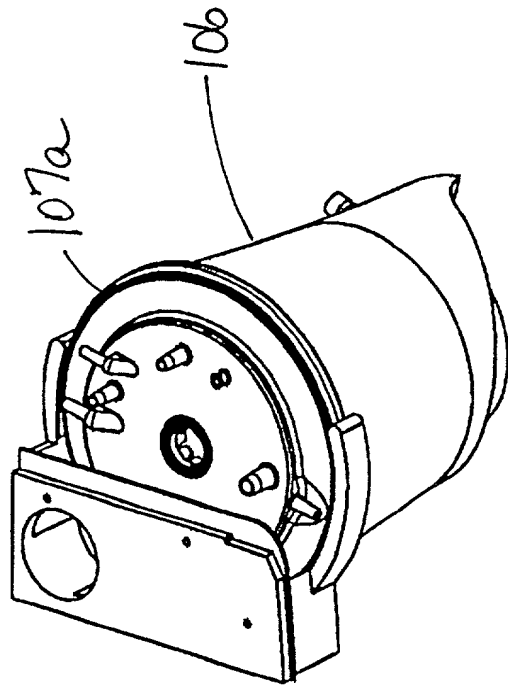


FIG. 7B

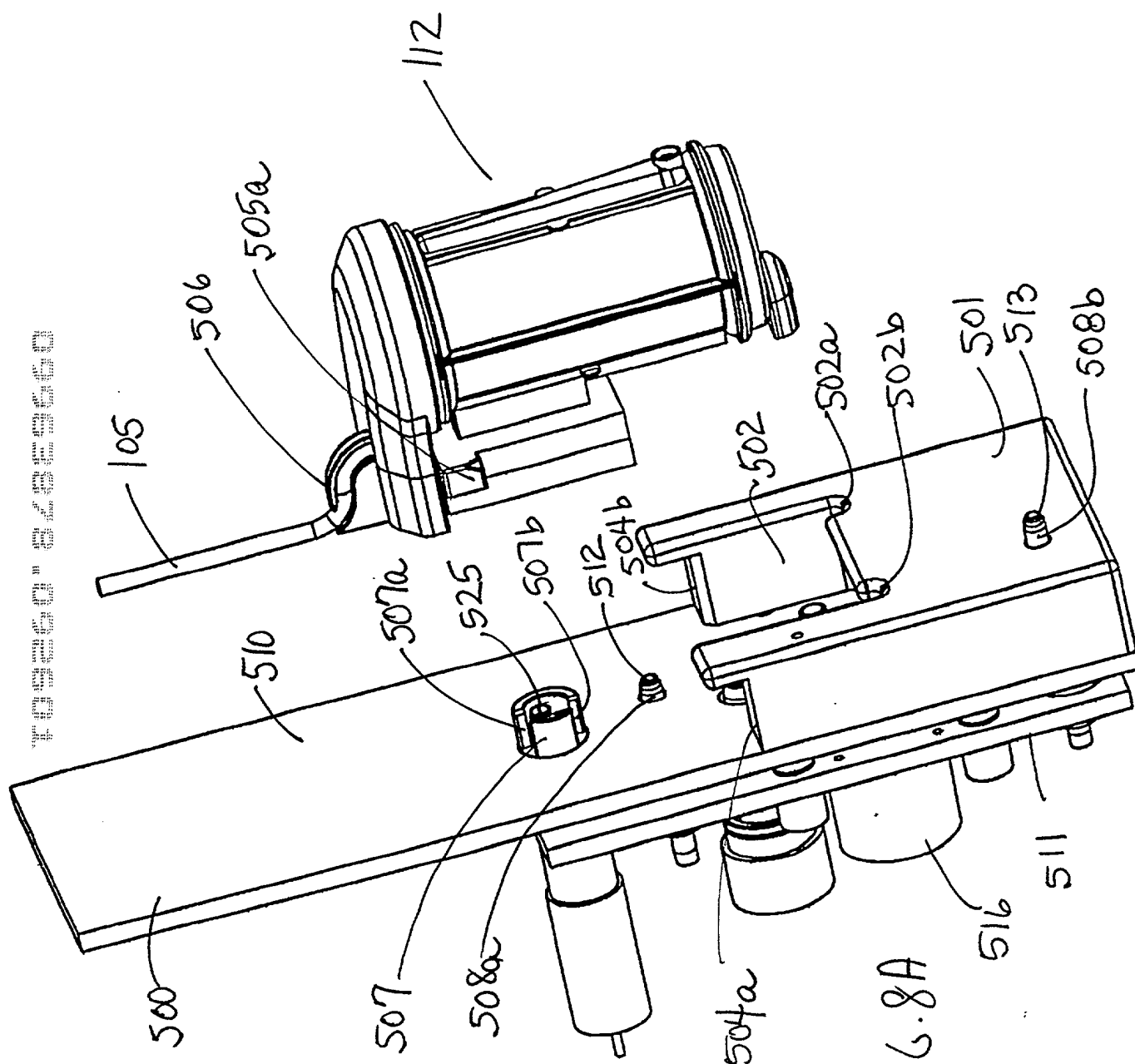


FIG. 8B

FIG. 8B

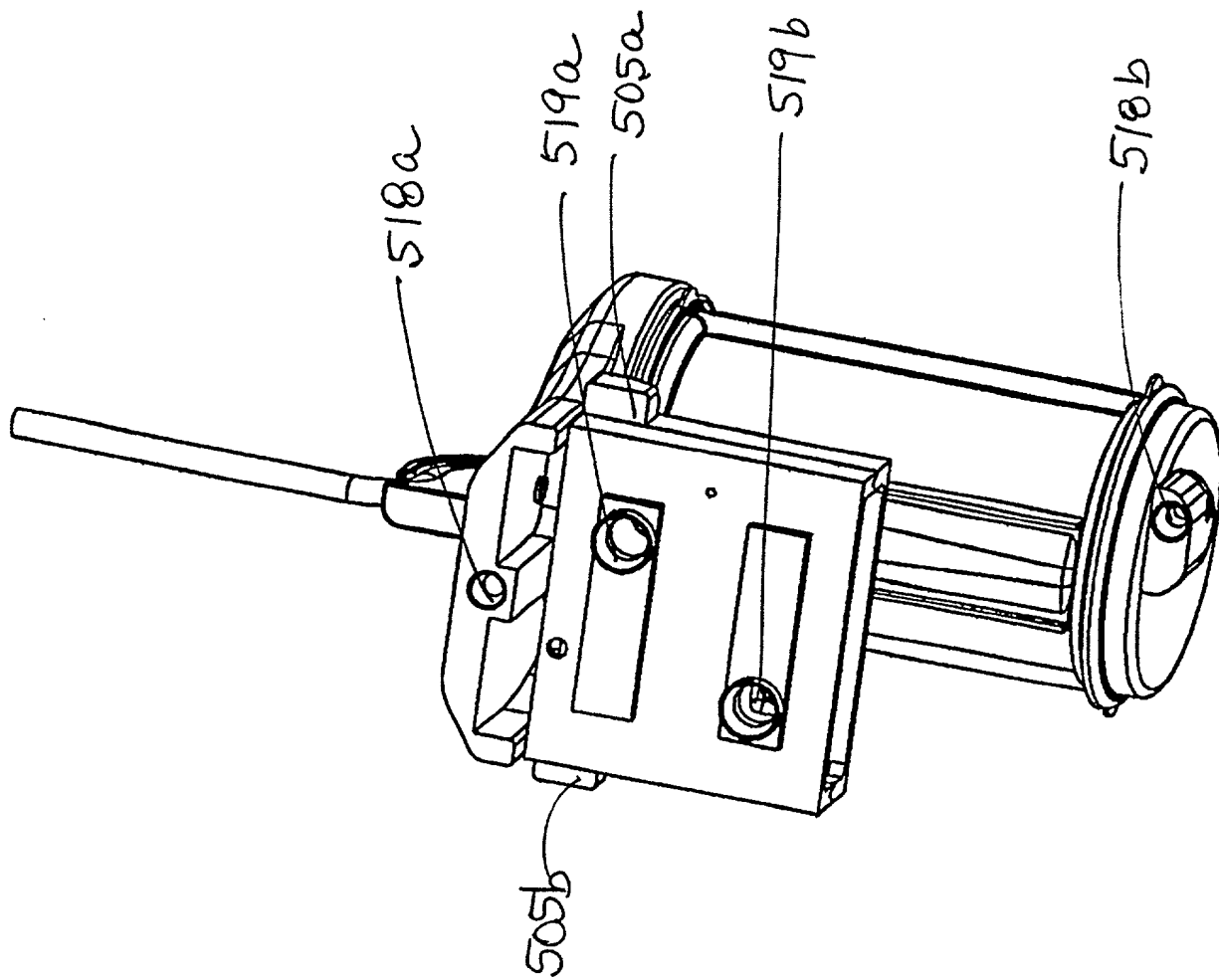


FIG. 1 is a perspective view of a device in accordance with the present invention. FIG. 2 is a top view of the device. FIG. 3 is a side view of the device. FIG. 4 is a cross-sectional view of the device. FIG. 5 is a perspective view of a component of the device. FIG. 6 is a perspective view of another component of the device. FIG. 7 is a perspective view of a third component of the device. FIG. 8 is a perspective view of a fourth component of the device. FIG. 9 is a perspective view of a fifth component of the device. FIG. 10 is a perspective view of a sixth component of the device. FIG. 11 is a perspective view of a seventh component of the device. FIG. 12 is a perspective view of an eighth component of the device. FIG. 13 is a perspective view of a ninth component of the device. FIG. 14 is a perspective view of a tenth component of the device. FIG. 15 is a perspective view of an eleventh component of the device. FIG. 16 is a perspective view of a twelfth component of the device. FIG. 17 is a perspective view of a thirteenth component of the device. FIG. 18 is a perspective view of a fourteenth component of the device. FIG. 19 is a perspective view of a fifteenth component of the device. FIG. 20 is a perspective view of a sixteenth component of the device. FIG. 21 is a perspective view of a seventeenth component of the device. FIG. 22 is a perspective view of an eighteenth component of the device. FIG. 23 is a perspective view of a nineteenth component of the device. FIG. 24 is a perspective view of a twentieth component of the device. FIG. 25 is a perspective view of a twenty-first component of the device. FIG. 26 is a perspective view of a twenty-second component of the device. FIG. 27 is a perspective view of a twenty-third component of the device. FIG. 28 is a perspective view of a twenty-fourth component of the device. FIG. 29 is a perspective view of a twenty-fifth component of the device. FIG. 30 is a perspective view of a twenty-sixth component of the device. FIG. 31 is a perspective view of a twenty-seventh component of the device. FIG. 32 is a perspective view of a twenty-eighth component of the device. FIG. 33 is a perspective view of a twenty-ninth component of the device. FIG. 34 is a perspective view of a thirtieth component of the device. FIG. 35 is a perspective view of a thirty-first component of the device. FIG. 36 is a perspective view of a thirty-second component of the device. FIG. 37 is a perspective view of a thirty-third component of the device. FIG. 38 is a perspective view of a thirty-fourth component of the device. FIG. 39 is a perspective view of a thirty-fifth component of the device. FIG. 40 is a perspective view of a thirty-sixth component of the device. FIG. 41 is a perspective view of a thirty-seventh component of the device. FIG. 42 is a perspective view of a thirty-eighth component of the device. FIG. 43 is a perspective view of a thirty-ninth component of the device. FIG. 44 is a perspective view of a fortieth component of the device. FIG. 45 is a perspective view of a forty-first component of the device. FIG. 46 is a perspective view of a forty-second component of the device. FIG. 47 is a perspective view of a forty-third component of the device. FIG. 48 is a perspective view of a forty-fourth component of the device. FIG. 49 is a perspective view of a forty-fifth component of the device. FIG. 50 is a perspective view of a forty-sixth component of the device. FIG. 51 is a perspective view of a forty-seventh component of the device. FIG. 52 is a perspective view of a forty-eighth component of the device. FIG. 53 is a perspective view of a forty-ninth component of the device. FIG. 54 is a perspective view of a fiftieth component of the device. FIG. 55 is a perspective view of a fifty-first component of the device. FIG. 56 is a perspective view of a fifty-second component of the device. FIG. 57 is a perspective view of a fifty-third component of the device. FIG. 58 is a perspective view of a fifty-fourth component of the device. FIG. 59 is a perspective view of a fifty-fifth component of the device. FIG. 60 is a perspective view of a fifty-sixth component of the device. FIG. 61 is a perspective view of a fifty-seventh component of the device. FIG. 62 is a perspective view of a fifty-eighth component of the device. FIG. 63 is a perspective view of a fifty-ninth component of the device. FIG. 64 is a perspective view of a sixtieth component of the device. FIG. 65 is a perspective view of a sixty-first component of the device. FIG. 66 is a perspective view of a sixty-second component of the device. FIG. 67 is a perspective view of a sixty-third component of the device. FIG. 68 is a perspective view of a sixty-fourth component of the device. FIG. 69 is a perspective view of a sixty-fifth component of the device. FIG. 70 is a perspective view of a sixty-sixth component of the device. FIG. 71 is a perspective view of a sixty-seventh component of the device. FIG. 72 is a perspective view of a sixty-eighth component of the device. FIG. 73 is a perspective view of a sixty-ninth component of the device. FIG. 74 is a perspective view of a seventieth component of the device. FIG. 75 is a perspective view of a seventy-first component of the device. FIG. 76 is a perspective view of a seventy-second component of the device. FIG. 77 is a perspective view of a seventy-third component of the device. FIG. 78 is a perspective view of a seventy-fourth component of the device. FIG. 79 is a perspective view of a seventy-fifth component of the device. FIG. 80 is a perspective view of a seventy-sixth component of the device. FIG. 81 is a perspective view of a seventy-seventh component of the device. FIG. 82 is a perspective view of a seventy-eighth component of the device. FIG. 83 is a perspective view of a seventy-ninth component of the device. FIG. 84 is a perspective view of an eightieth component of the device. FIG. 85 is a perspective view of an eighty-first component of the device. FIG. 86 is a perspective view of an eighty-second component of the device. FIG. 87 is a perspective view of an eighty-third component of the device. FIG. 88 is a perspective view of an eighty-fourth component of the device. FIG. 89 is a perspective view of an eighty-fifth component of the device. FIG. 90 is a perspective view of an eighty-sixth component of the device. FIG. 91 is a perspective view of an eighty-seventh component of the device. FIG. 92 is a perspective view of an eighty-eighth component of the device. FIG. 93 is a perspective view of an eighty-ninth component of the device. FIG. 94 is a perspective view of a ninetieth component of the device. FIG. 95 is a perspective view of a ninety-first component of the device. FIG. 96 is a perspective view of a ninety-second component of the device. FIG. 97 is a perspective view of a ninety-third component of the device. FIG. 98 is a perspective view of a ninety-fourth component of the device. FIG. 99 is a perspective view of a ninety-fifth component of the device. FIG. 100 is a perspective view of a ninety-sixth component of the device. FIG. 101 is a perspective view of a ninety-seventh component of the device. FIG. 102 is a perspective view of a ninety-eighth component of the device. FIG. 103 is a perspective view of a ninety-ninth component of the device. FIG. 104 is a perspective view of a hundredth component of the device.

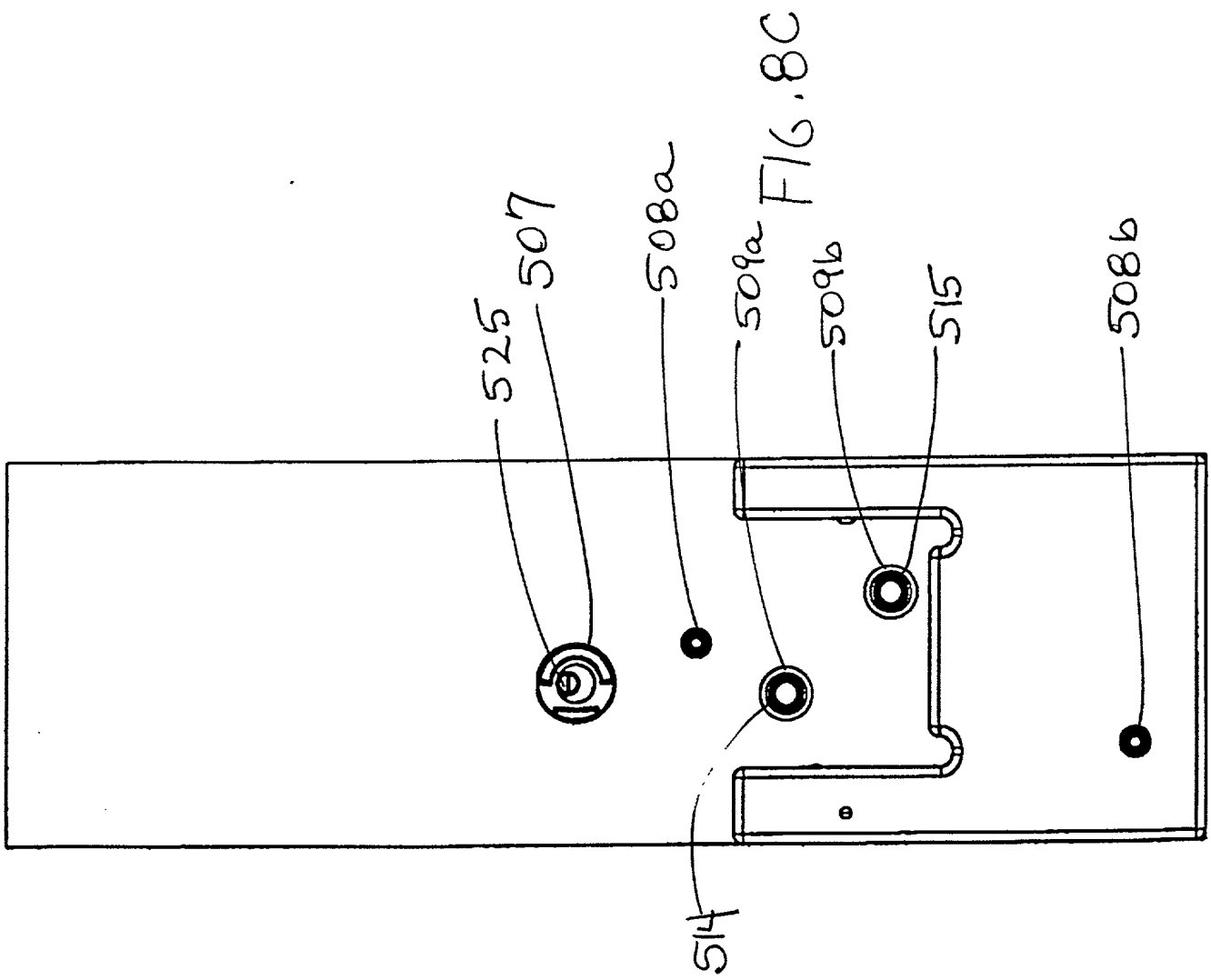
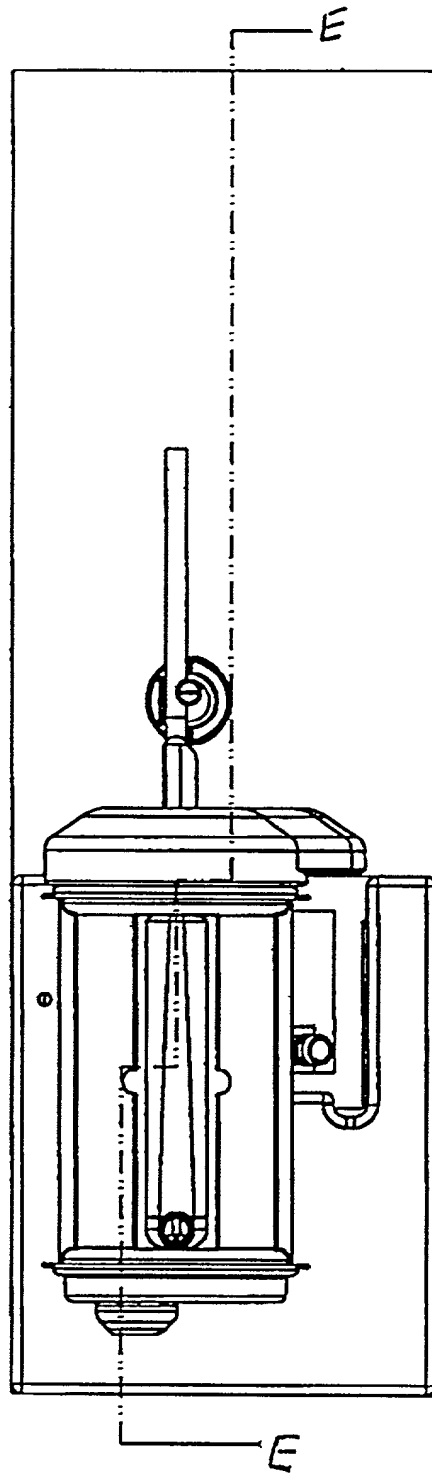


FIG. 8D



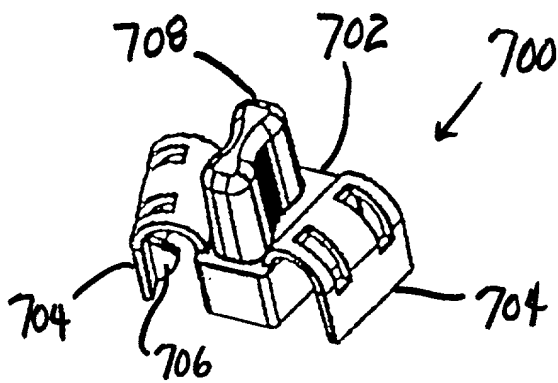


FIG. 9A

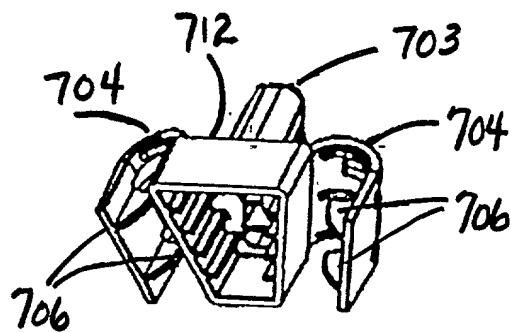


FIG. 9B

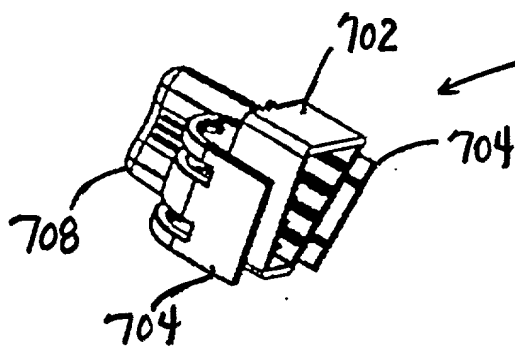


FIG. 9C

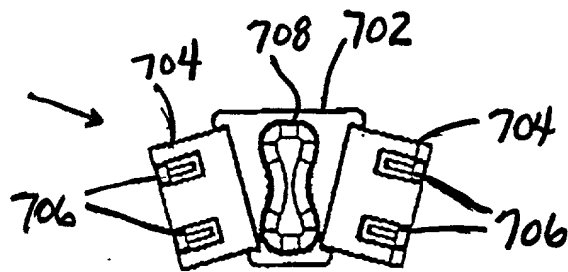


FIG. 9D

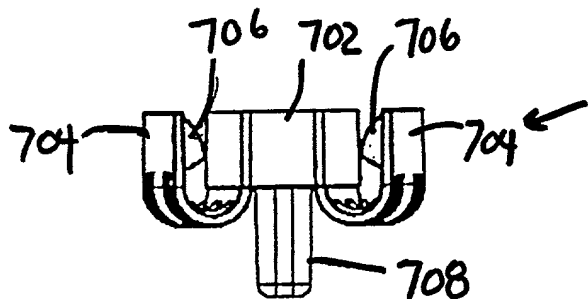


FIG. 9E

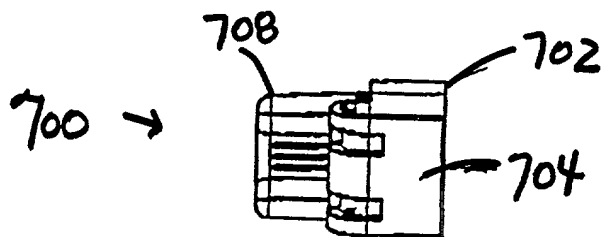


FIG. 9F

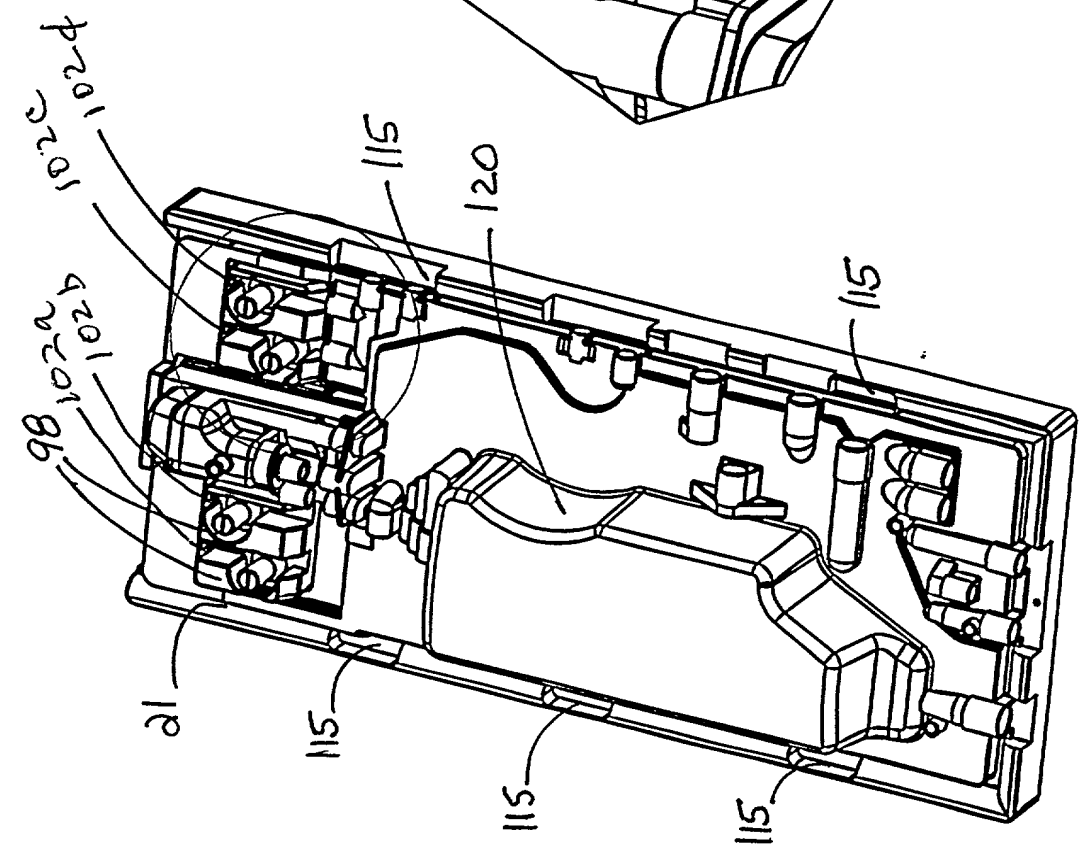
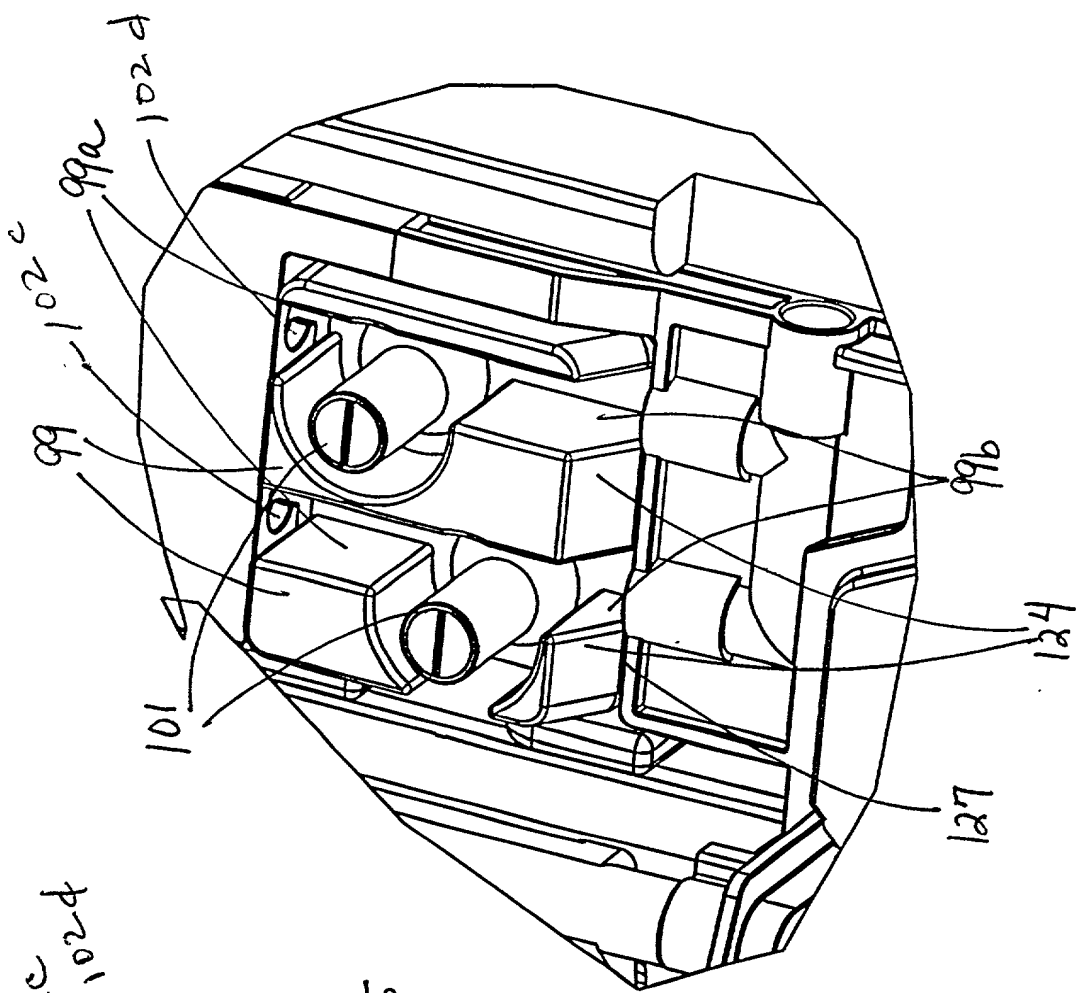


FIG. 10C is a perspective view of the device 100 in an open position, showing the internal components and the hinge mechanism. The device 100 is shown in a perspective view, with the top cover 21 and the bottom cover 115 separated. The hinge mechanism 121 is visible, connecting the two covers. The internal components, including the display 117 and the battery 115, are shown within the bottom cover 115. The device 100 is shown in a perspective view, with the top cover 21 and the bottom cover 115 separated. The hinge mechanism 121 is visible, connecting the two covers. The internal components, including the display 117 and the battery 115, are shown within the bottom cover 115.

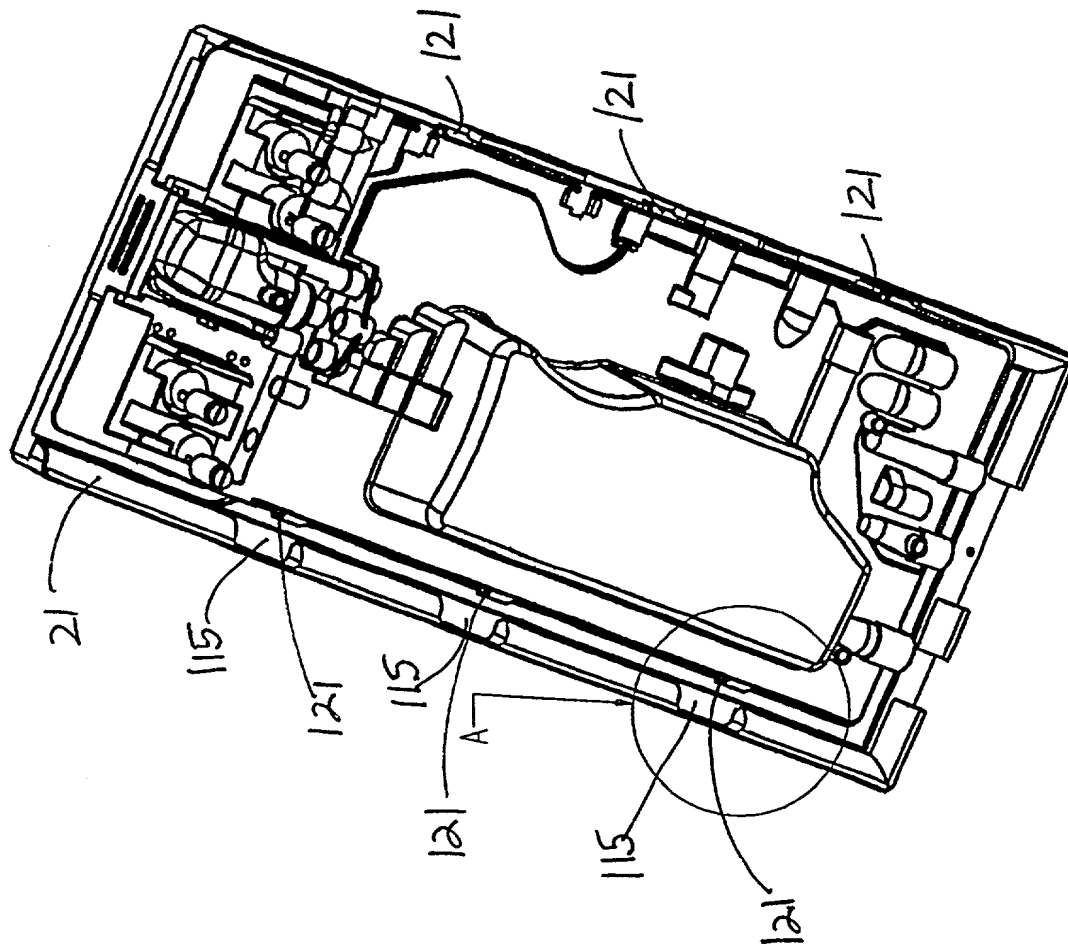


FIG. 10C

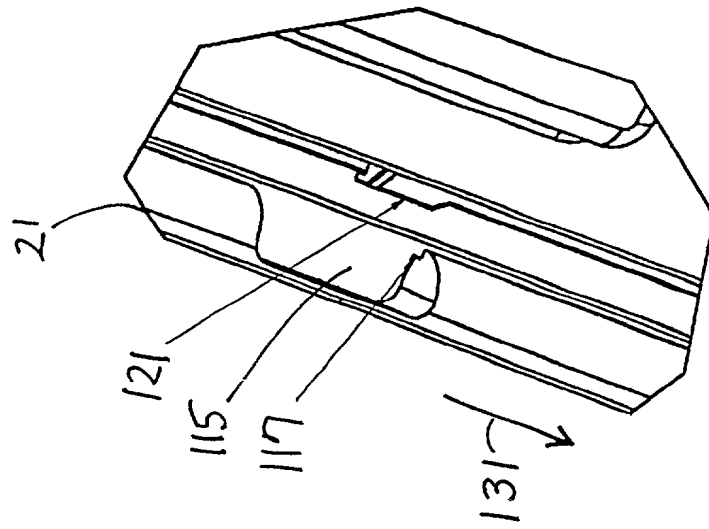


FIG. 10D

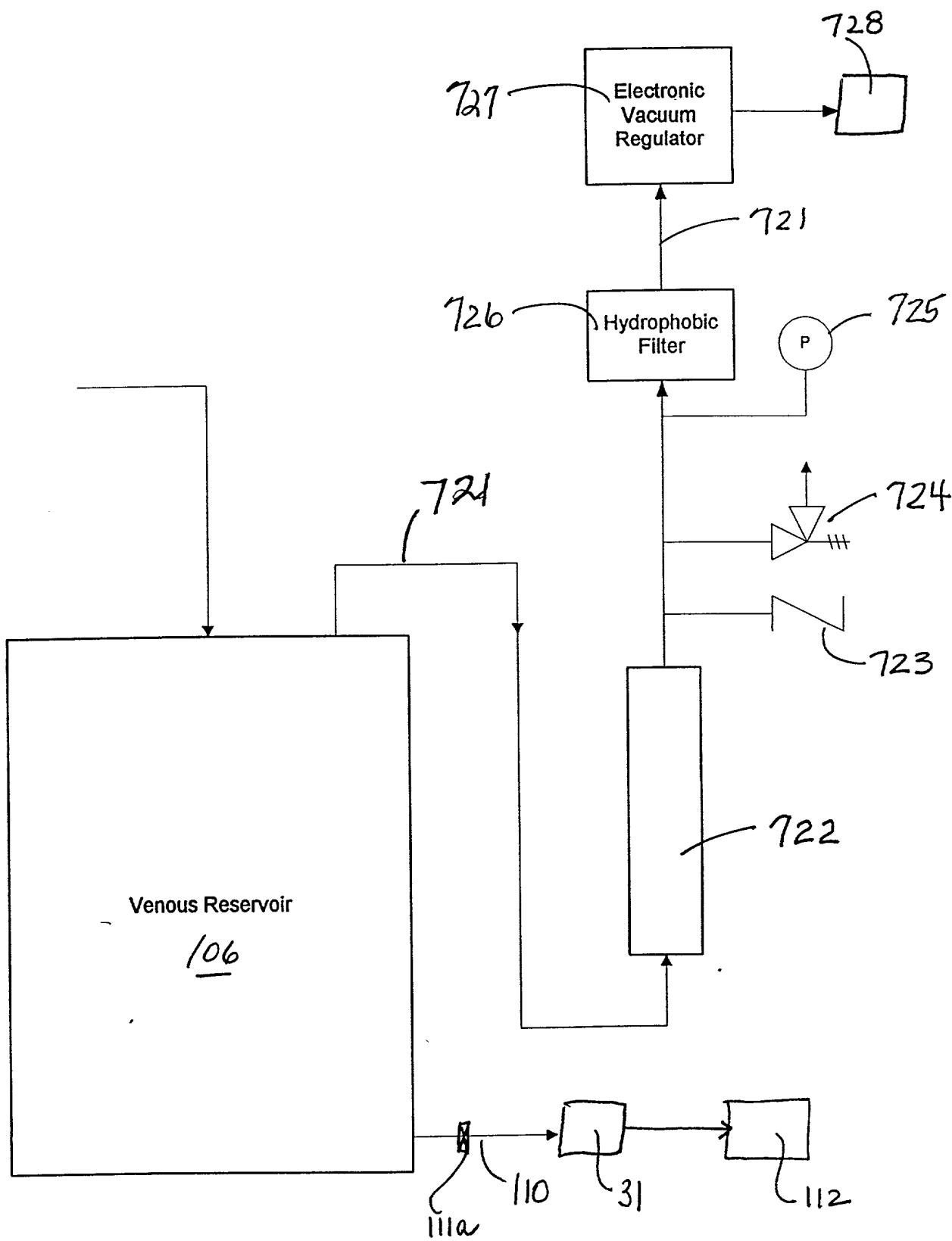


FIG. 11

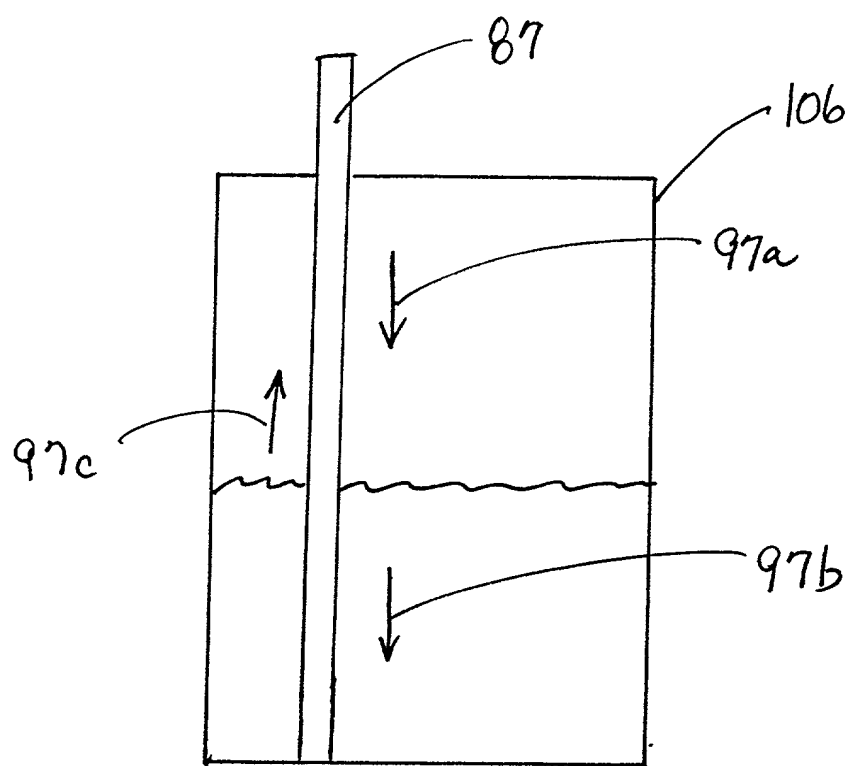
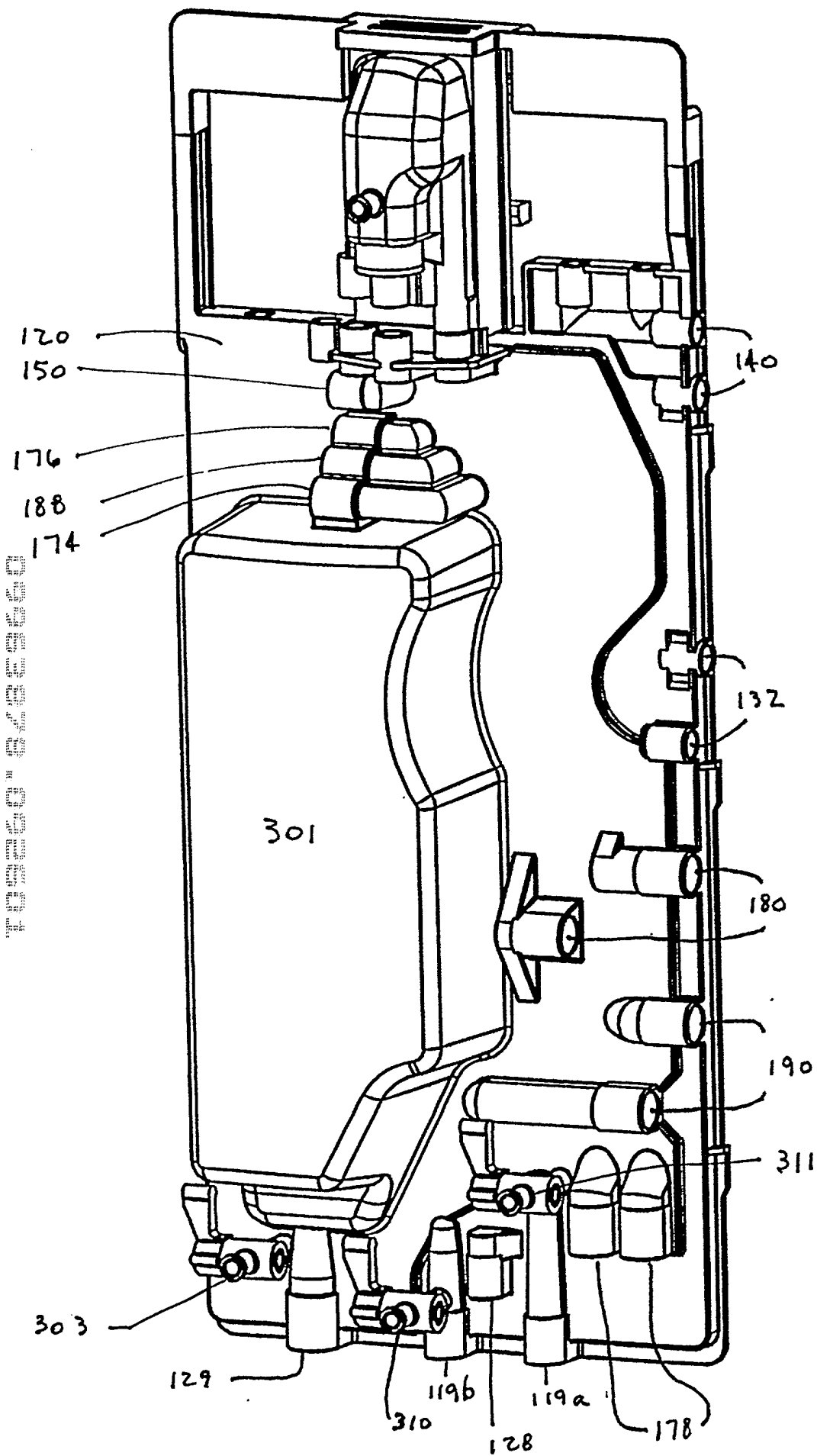


FIG. 12



F16.13

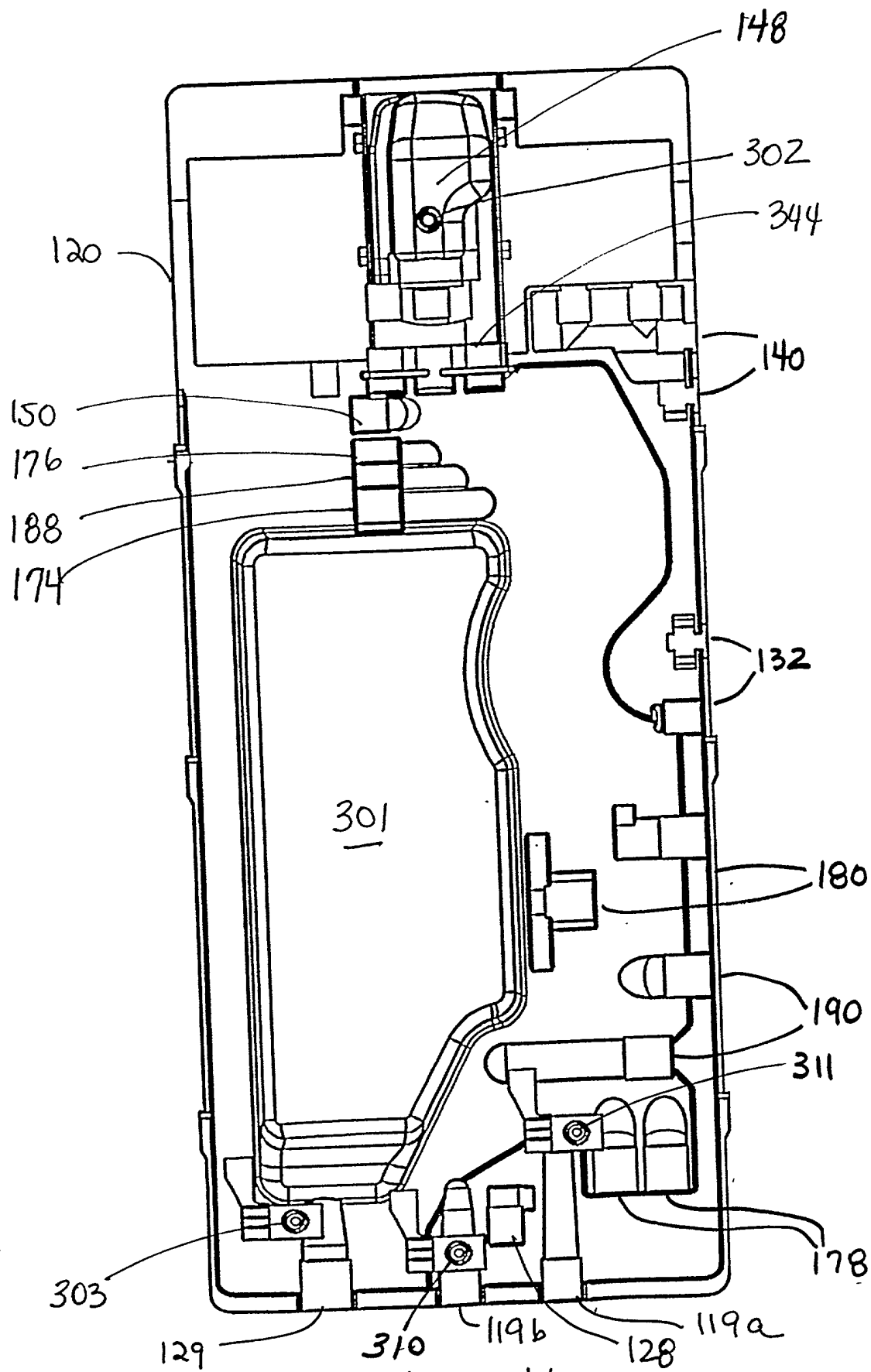


FIG. 14

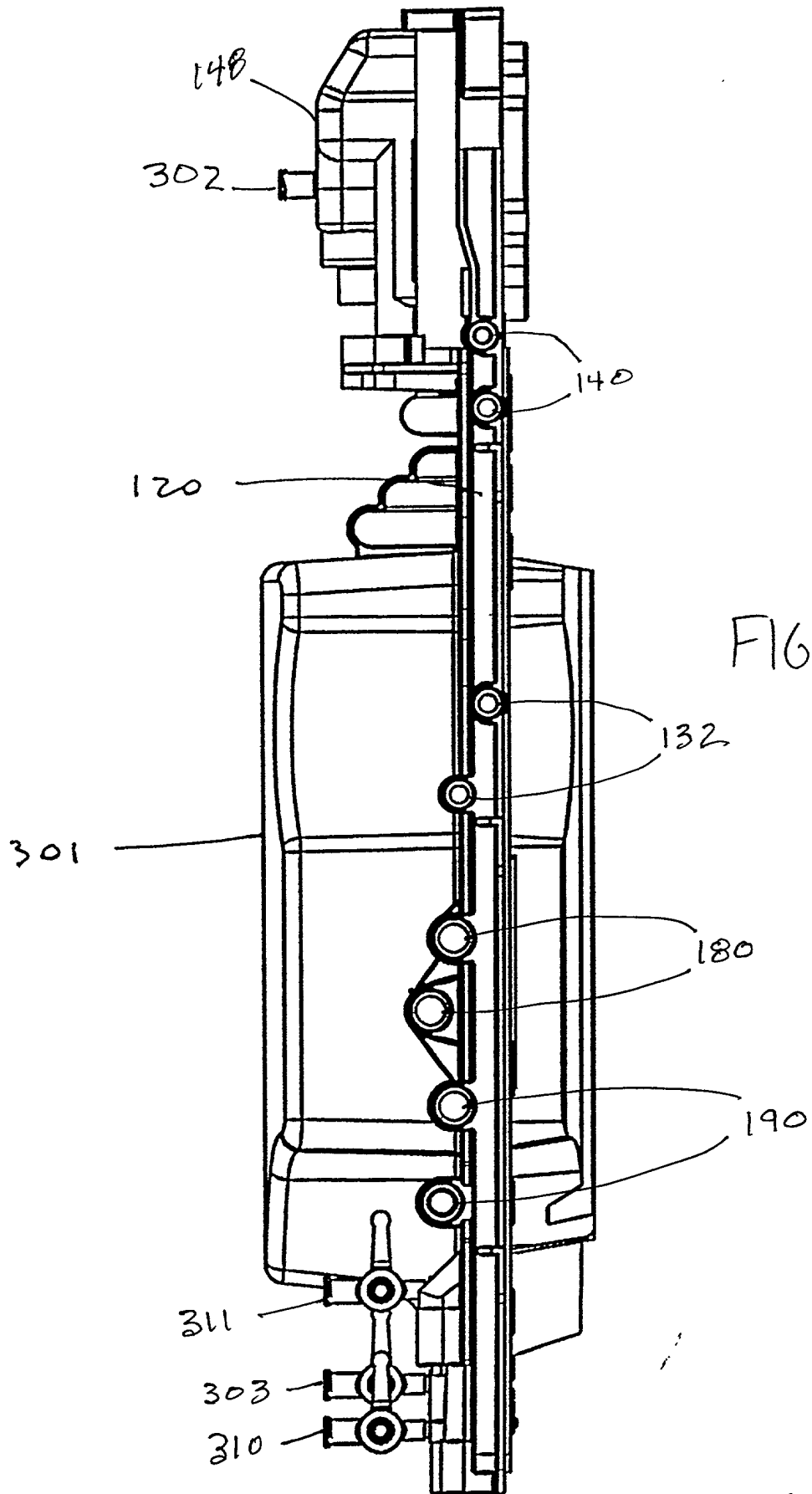


FIG. 16

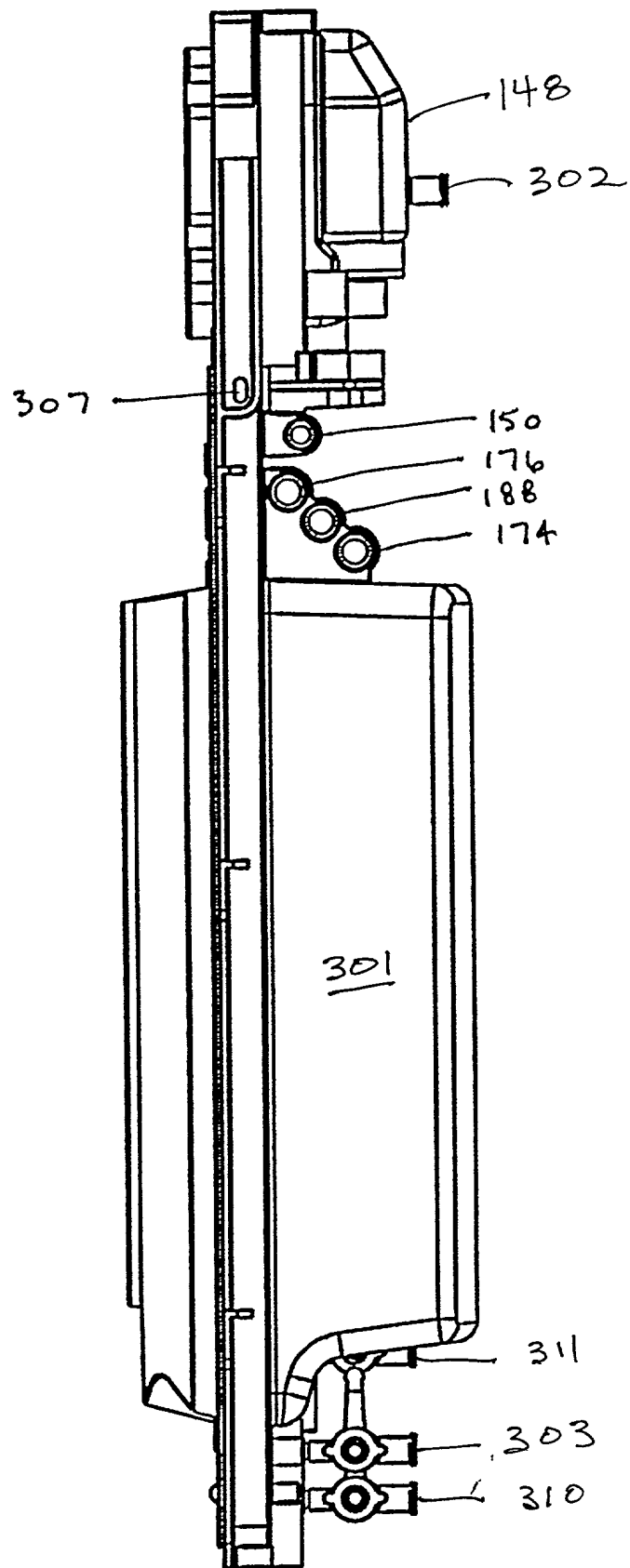


FIG. 17 is a perspective view of the device 100 in a closed position, showing the housing 301, the handle 302, the trigger 311, and the locking mechanism 148. The locking mechanism 148 is shown in a cross-sectional view, revealing the internal components including the locking pin 102a, the locking pin 102b, the locking pin 102c, and the locking pin 102d. The locking pin 102a is shown in a retracted position, while the locking pin 102b is shown in an extended position, locking the handle 302 to the housing 301. The locking pin 102c and 102d are also shown in extended positions, locking the trigger 311 to the housing 301.

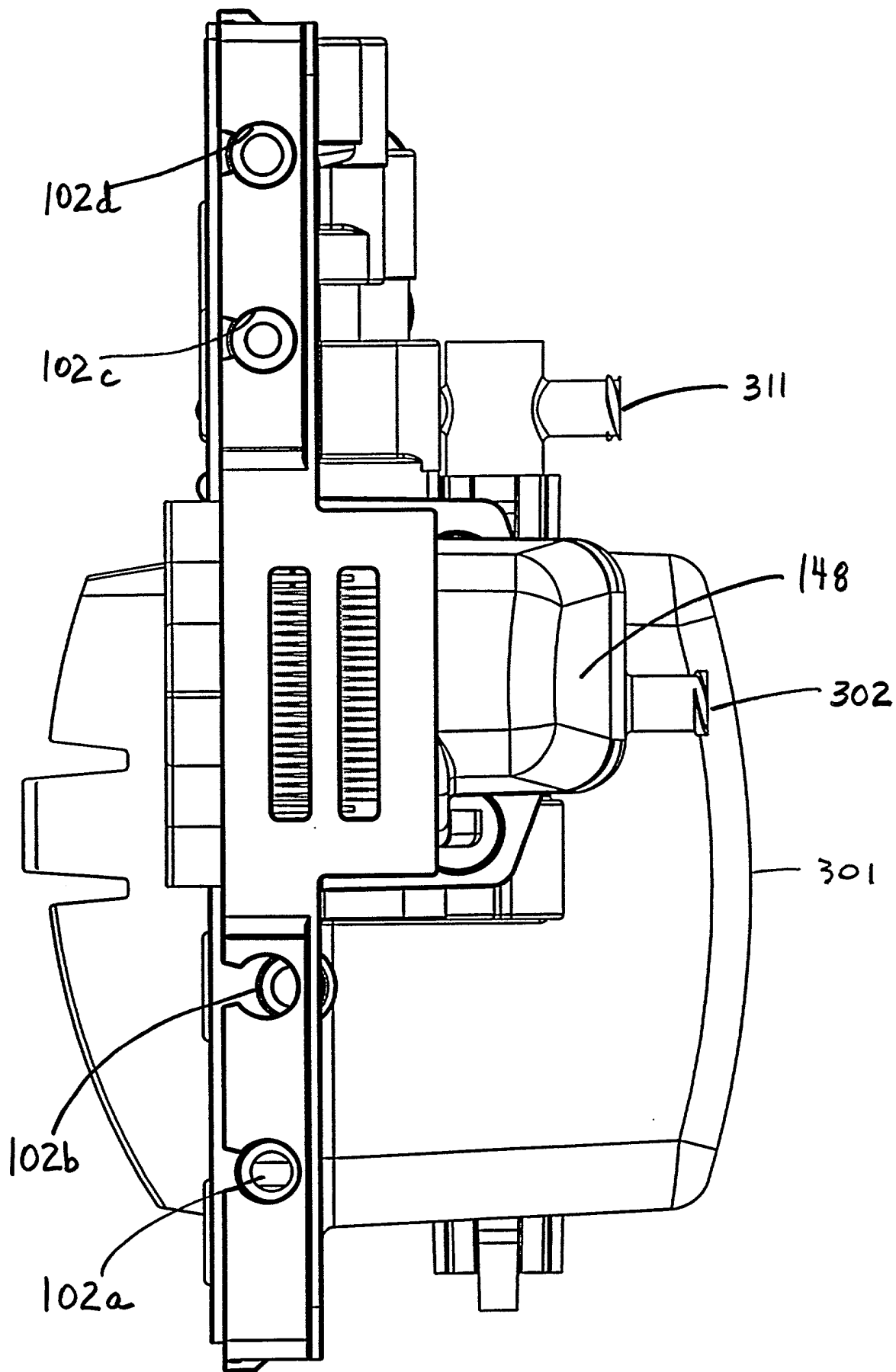


FIG. 17

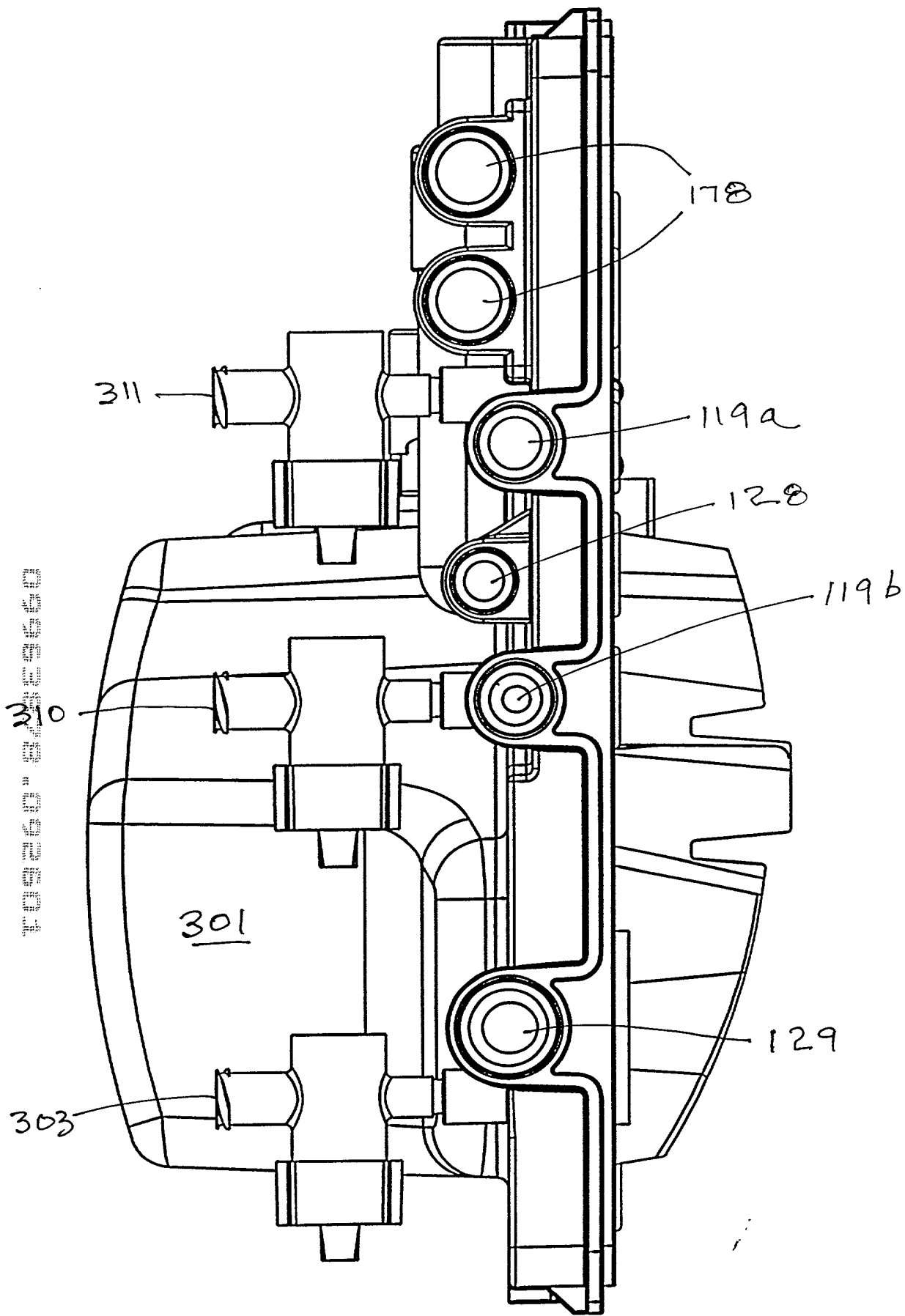


FIG. 18

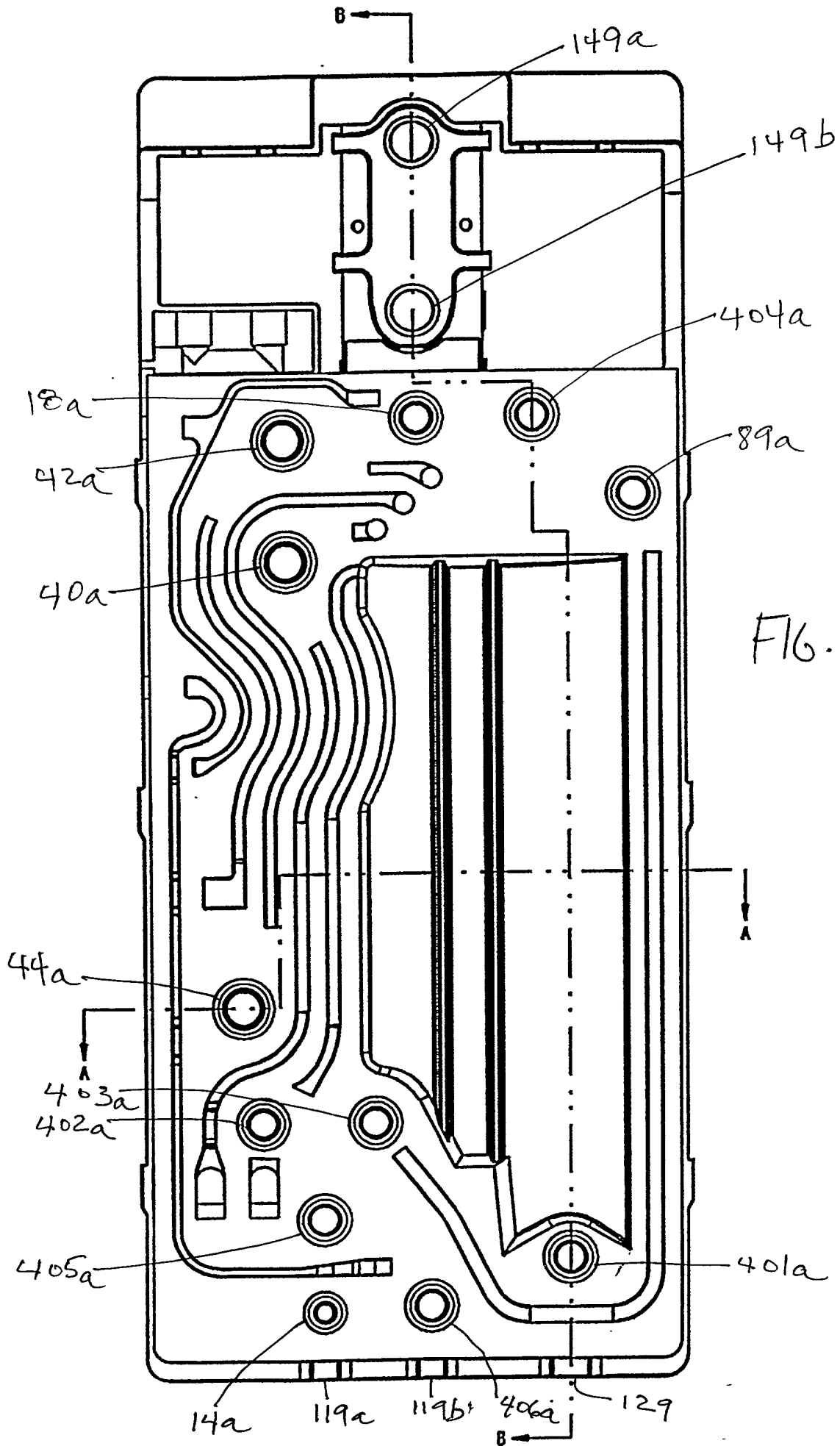


FIG. 16B

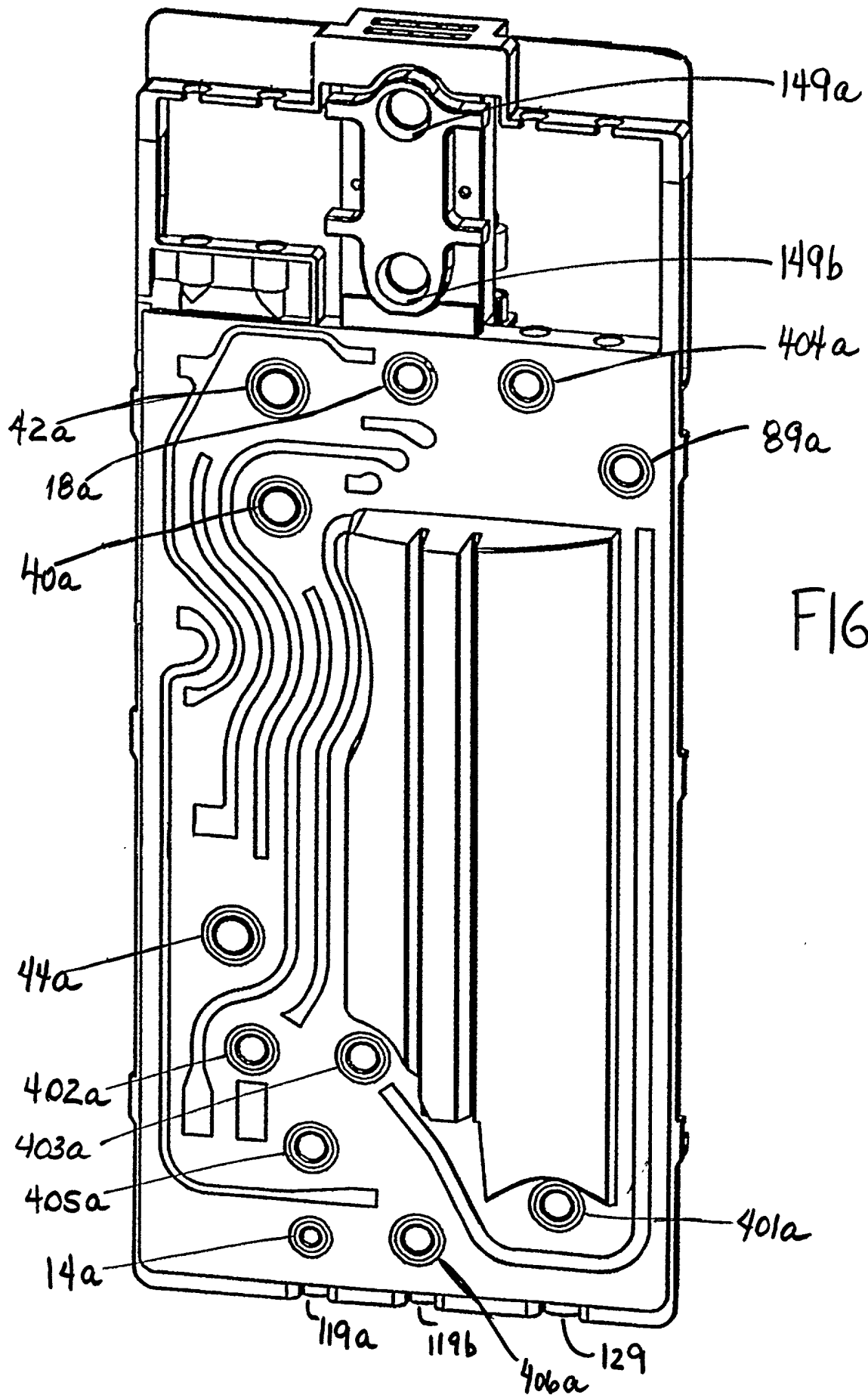
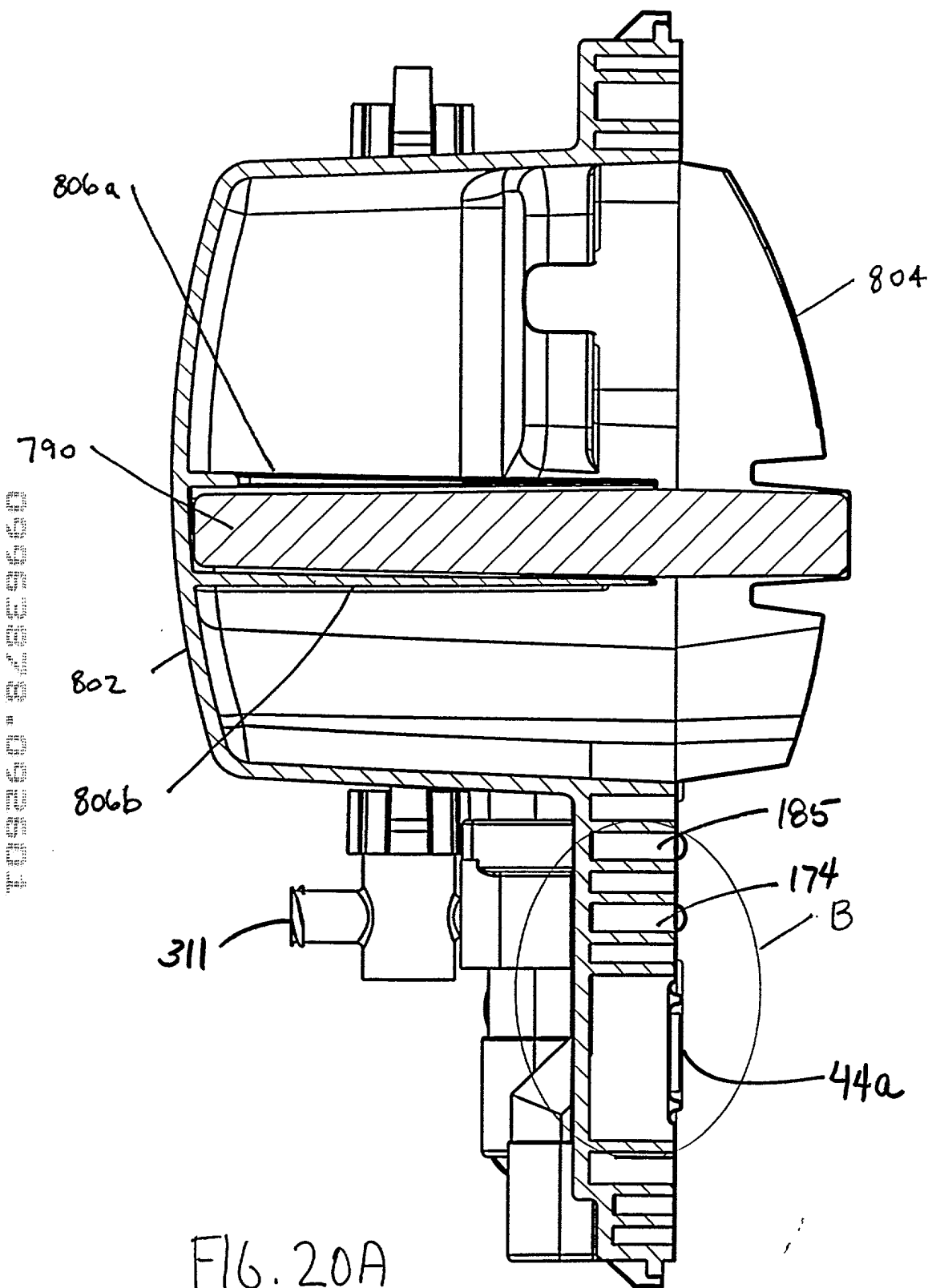


FIG. 16B



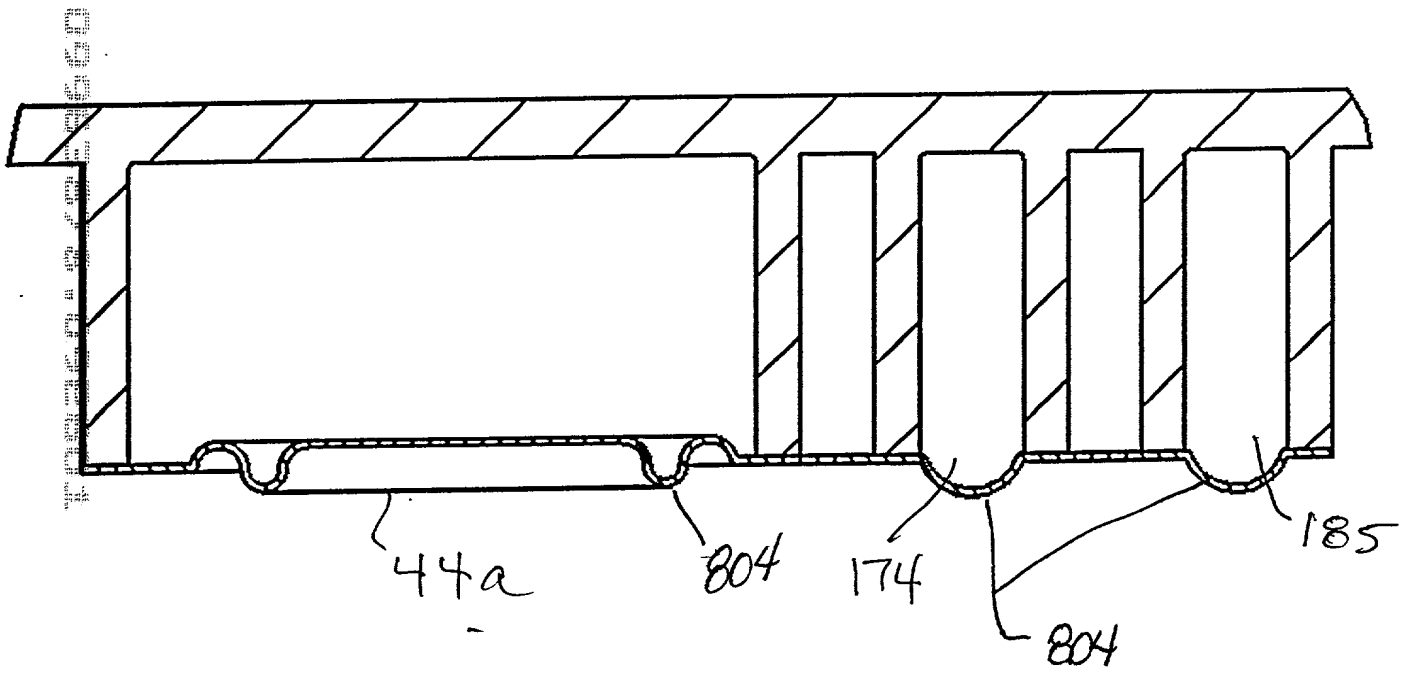
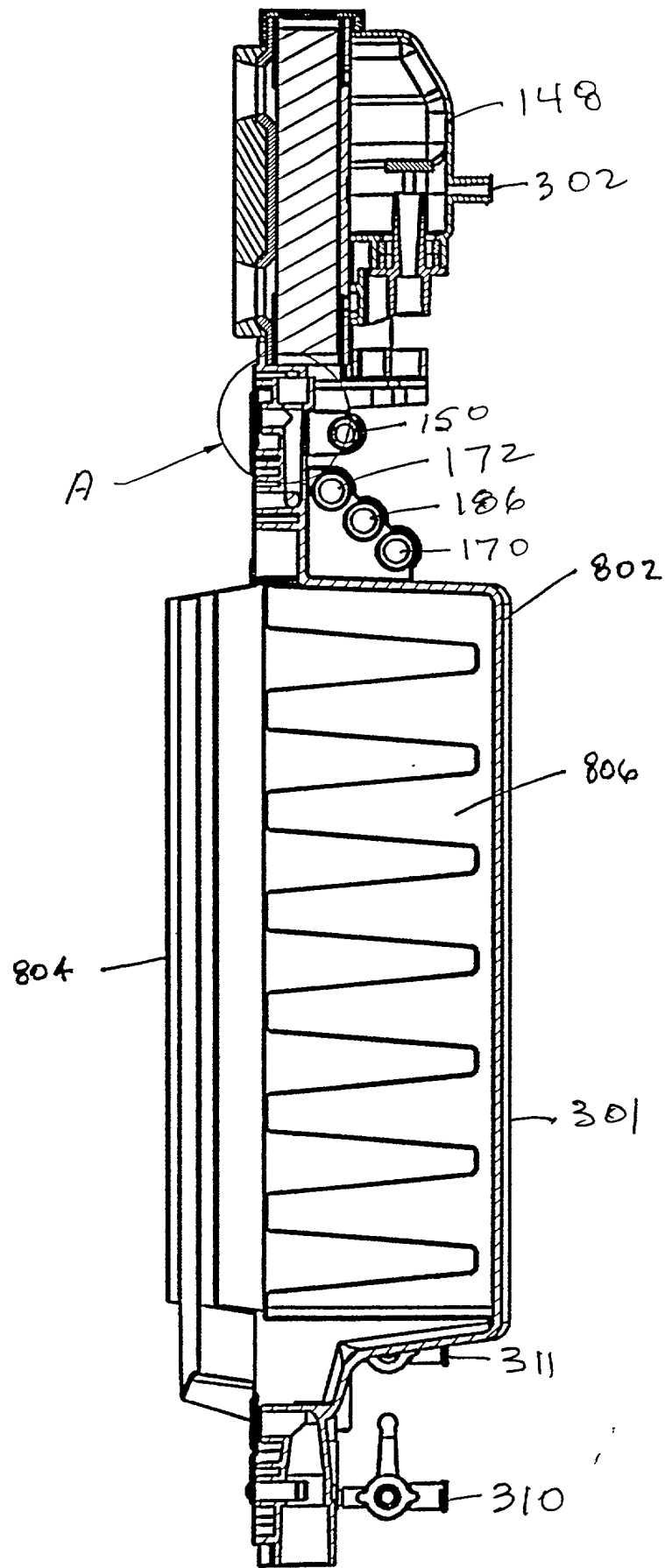


Fig. 20B



F16. 21

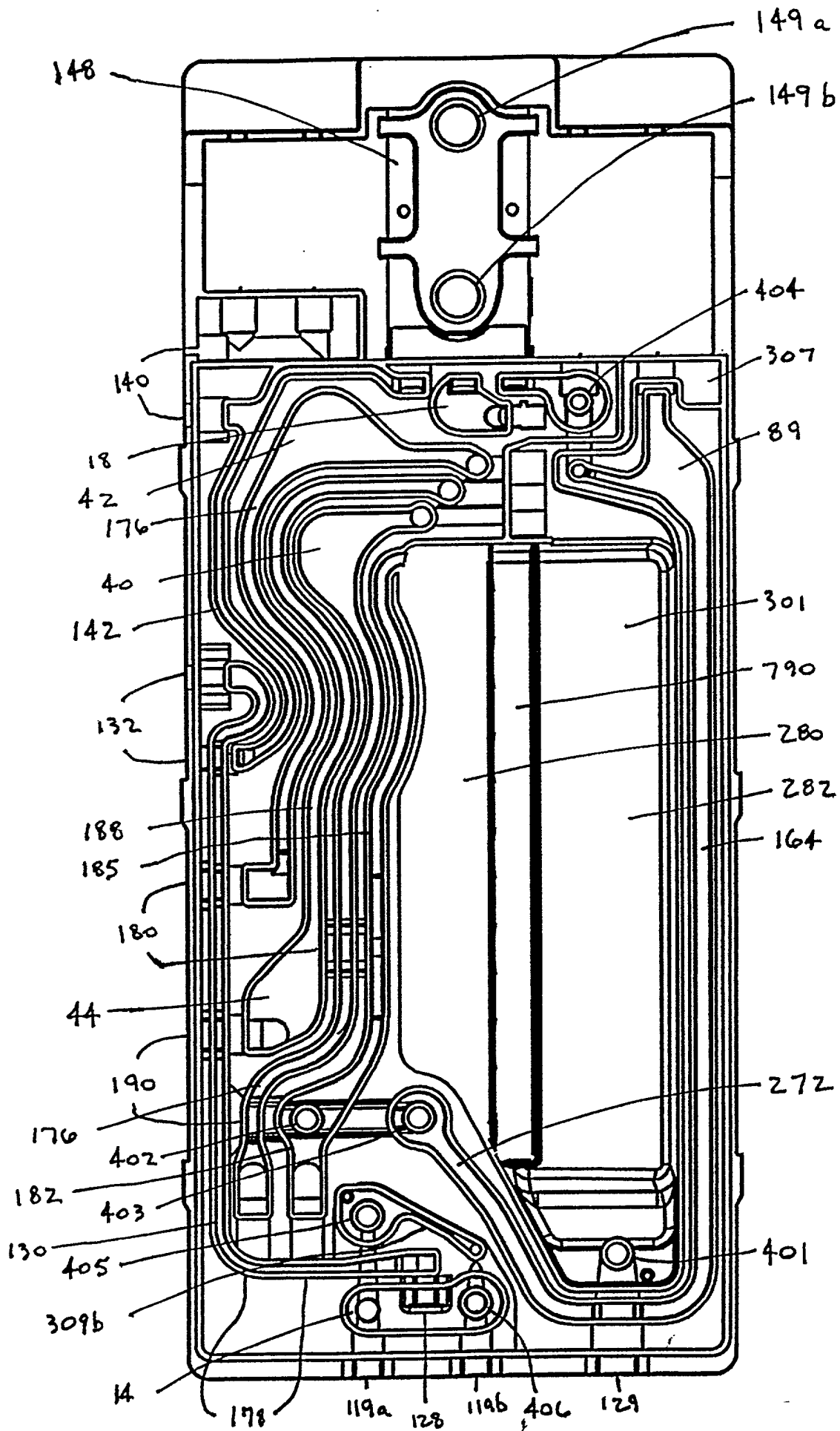


FIG. 22

FIG. 23A is a perspective view of a component of a device, showing a central circular opening 808, a surrounding ring 810, and a vertical support structure 812. The component is mounted on a base 120. The ring 810 is connected to the support structure 812 by a horizontal member 816. The support structure 812 includes a rectangular opening 814.

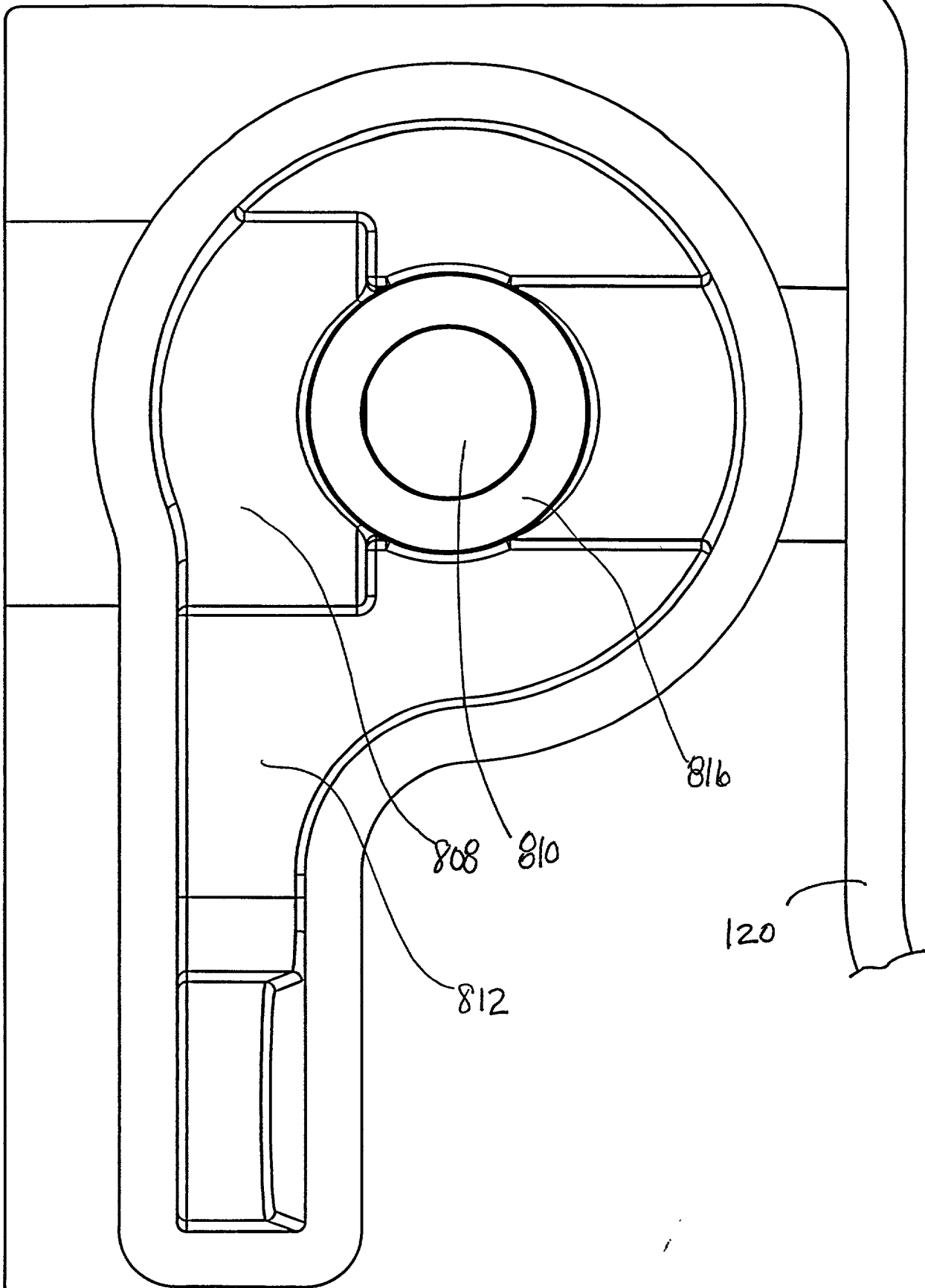


FIG. 23 A

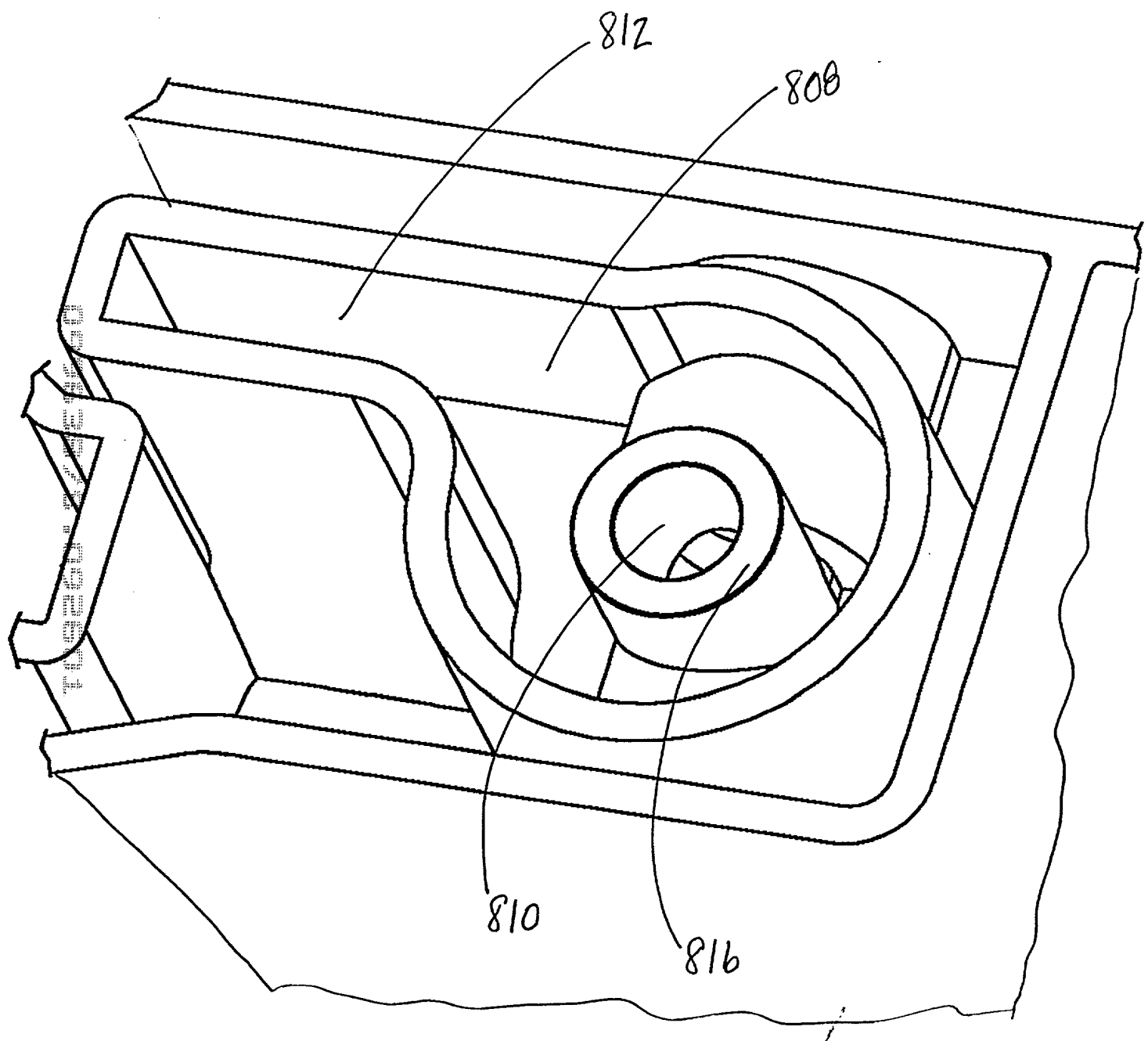


Fig. 23B

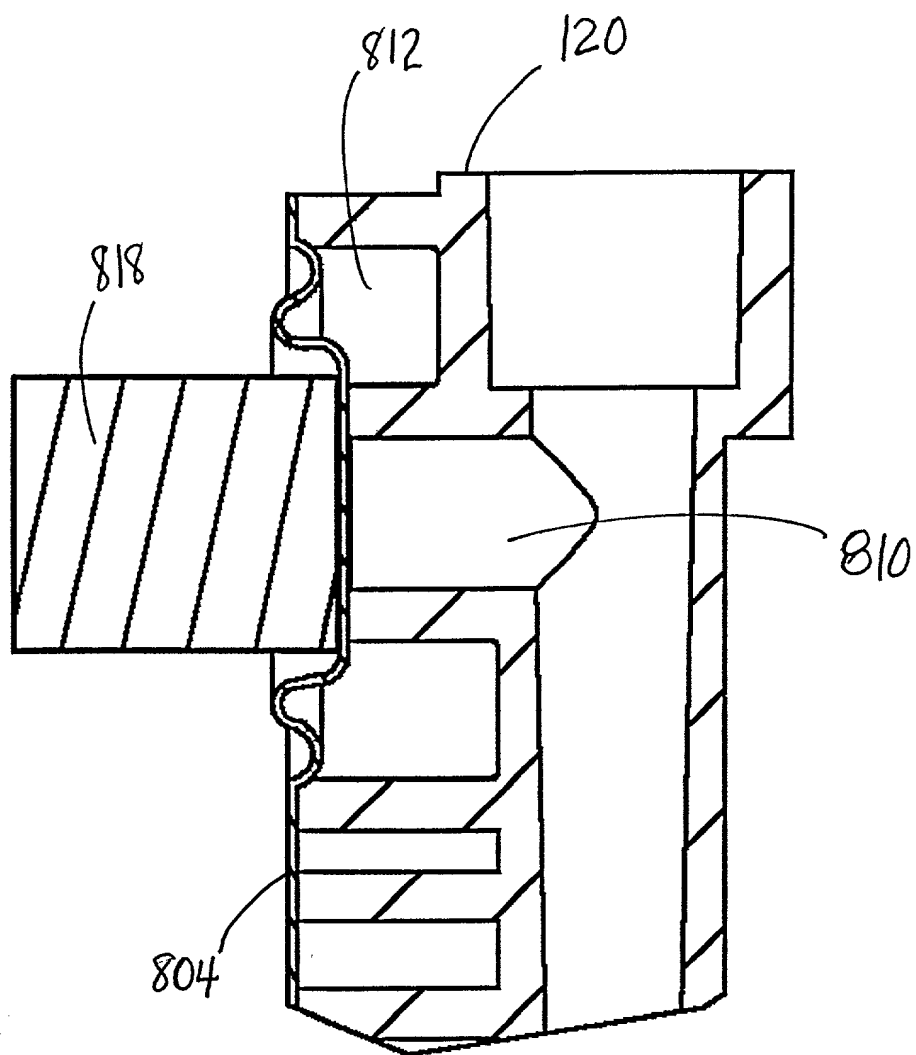


FIG 24 A

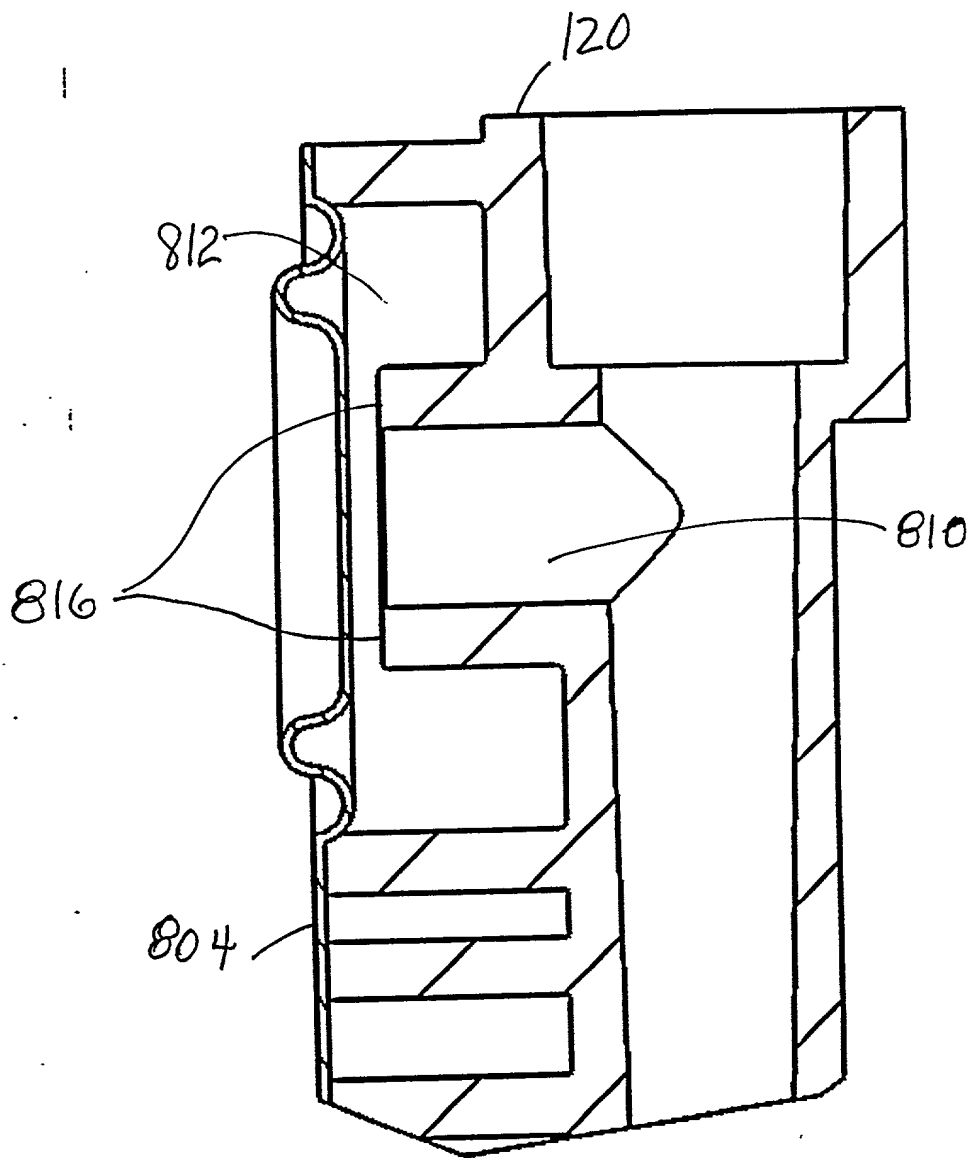


FIG 24B

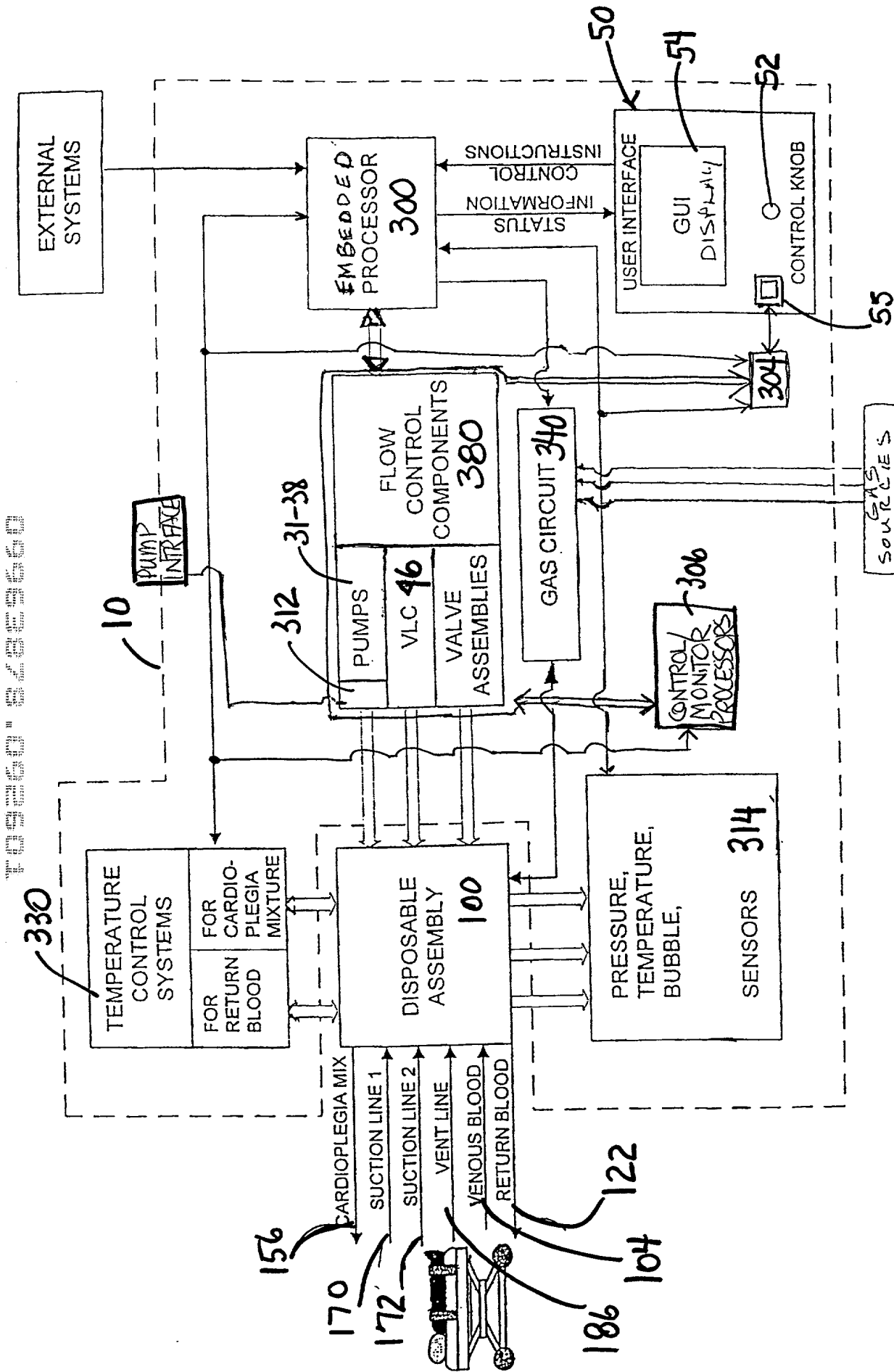


FIG. 25

FIG. 16 is a schematic diagram of a gas delivery system 10, according to one embodiment of the present invention. The system 10 includes a scavenge line 340, a liquid leak detector 366, a filter 362, a vaporizer (optional) 358, a total flow meter 356, a 5% CO2/95% O2 flow meter 354c, an O2 flow meter 354b, an Air flow meter 354a, a pressure regulator 346c, a pressure regulator 346b, a pressure regulator 346a, a filter 344c, a filter 344b, a filter 344a, a 5% CO2/95% O2 source 342c, an O2 source 342b, an Air source 342a, a sampling pump 368a, a sampling pump 368b, a dryer 367, an O2/CO2 monitor 370, and an optional gas concentration monitoring system 367. The system 10 is configured to deliver a gas mixture to a patient through a scavenge line 340. The gas mixture is derived from a 5% CO2/95% O2 source 342c, an O2 source 342b, and an Air source 342a. The gas mixture passes through a series of filters 344a, 344b, and 344c, pressure regulators 346a, 346b, and 346c, and flow meters 354a, 354b, and 354c. The gas mixture then passes through a total flow meter 356 and a liquid leak detector 366. The gas mixture is then delivered to a patient through a scavenge line 340. The system 10 also includes an optional gas concentration monitoring system 367, which includes a sampling pump 368a, a sampling pump 368b, a dryer 367, and an O2/CO2 monitor 370.

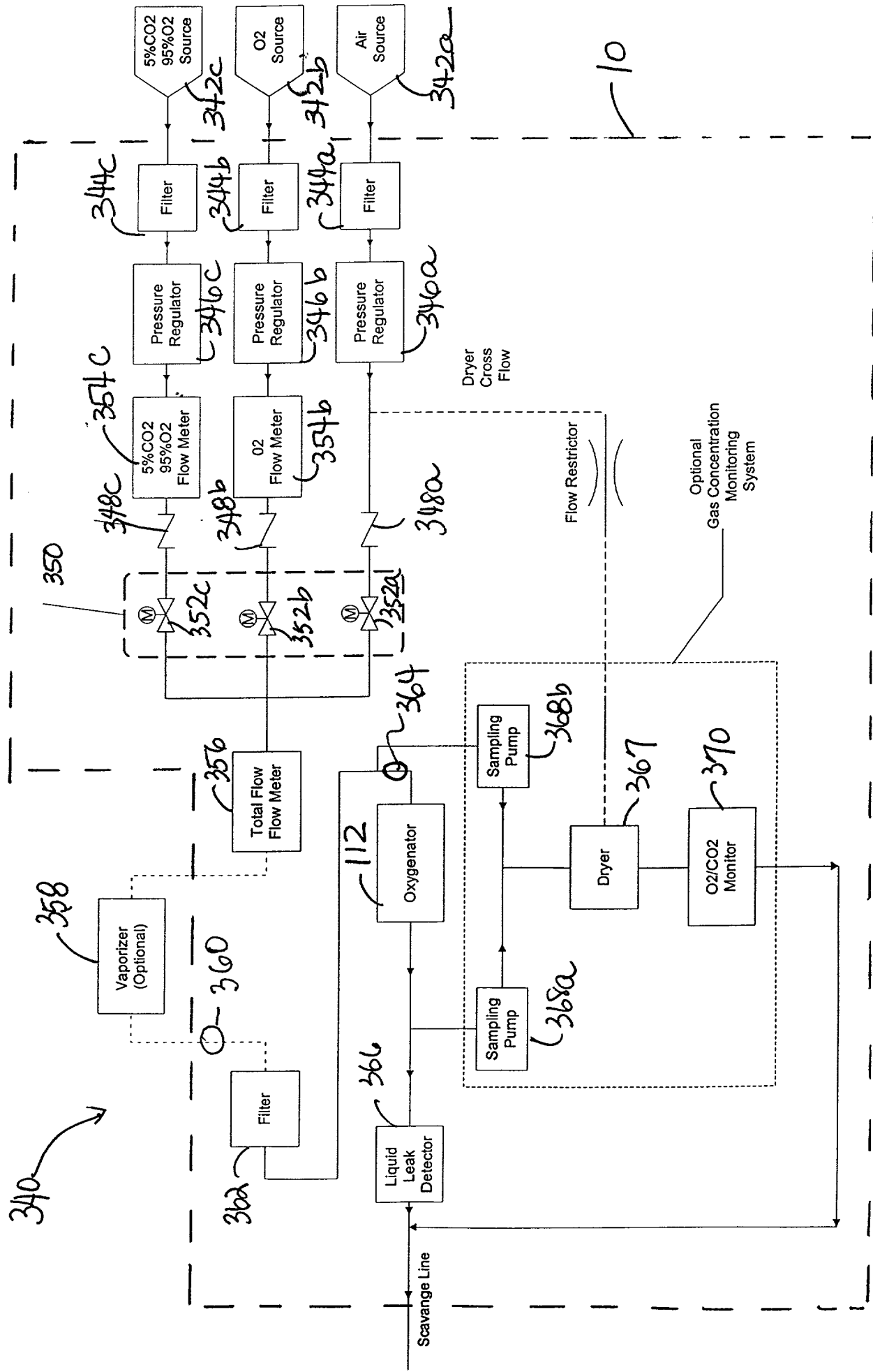


FIG. 16. 26

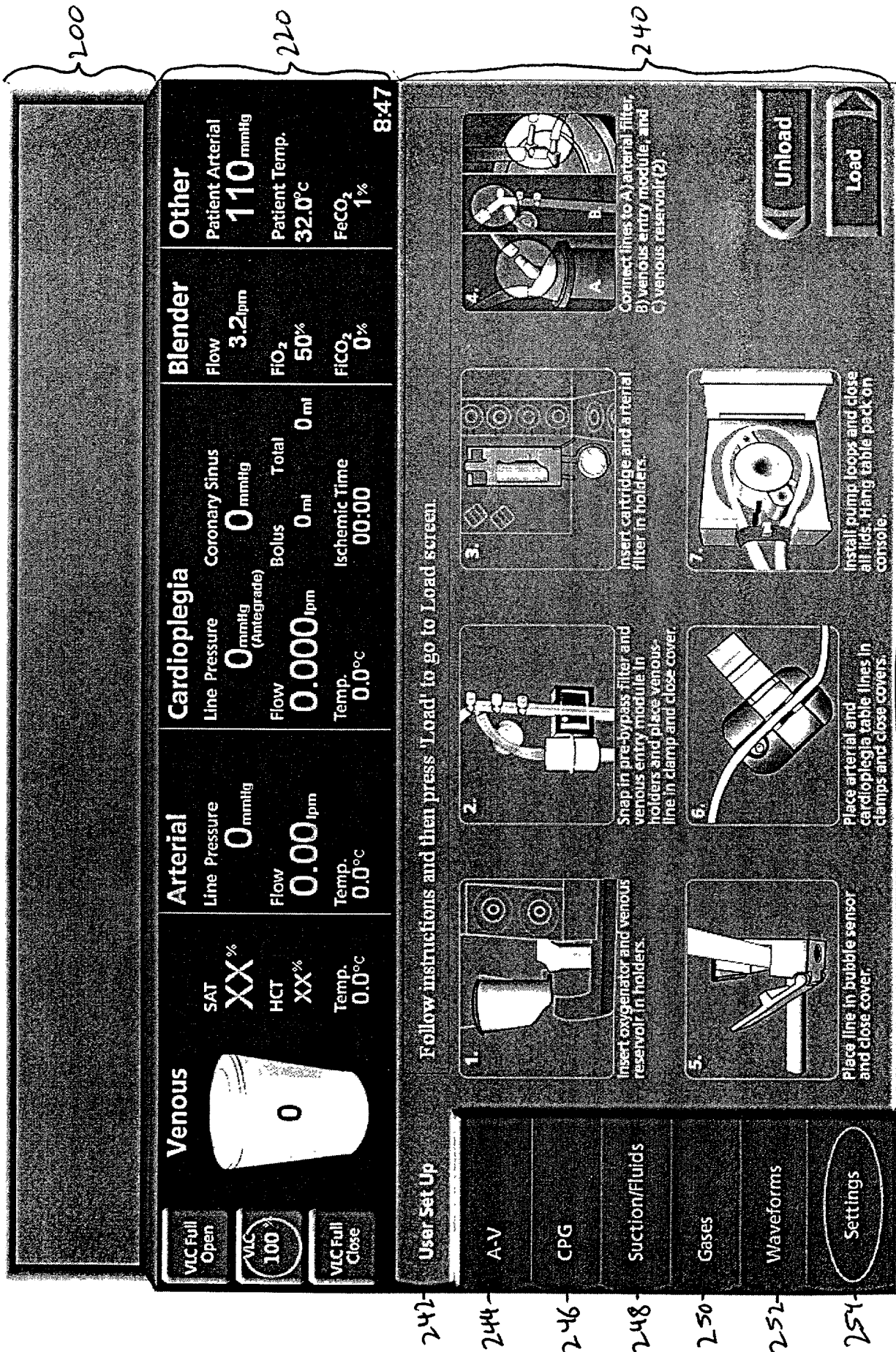


FIG. 27

FIG. 28A

202a'

202a''

204

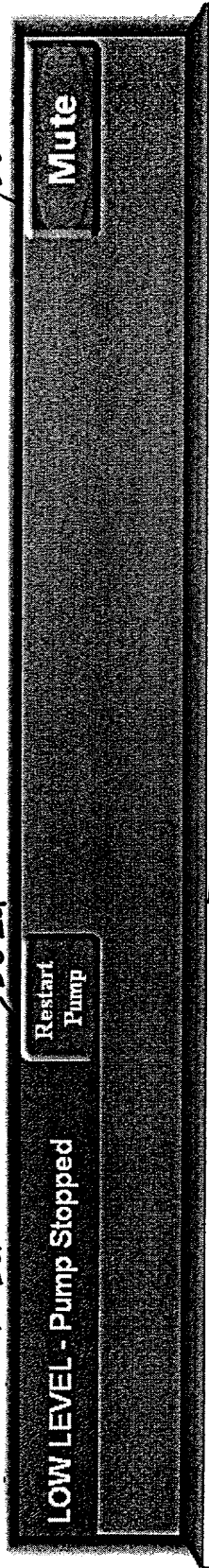


FIG. 28A

202b'

202b''

204

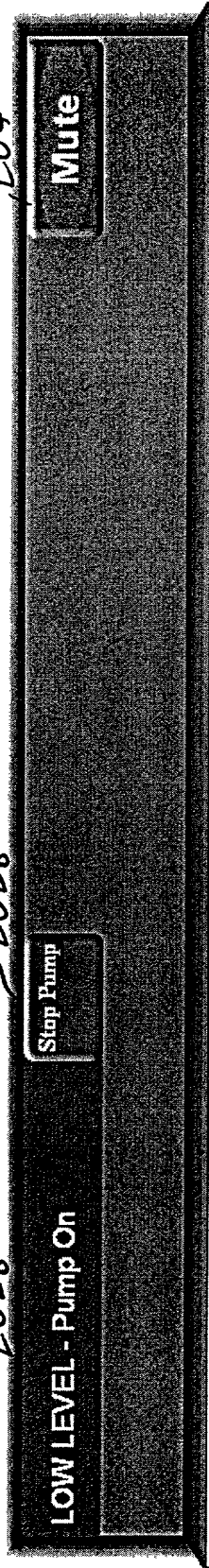


FIG. 28B

202c'

202c''

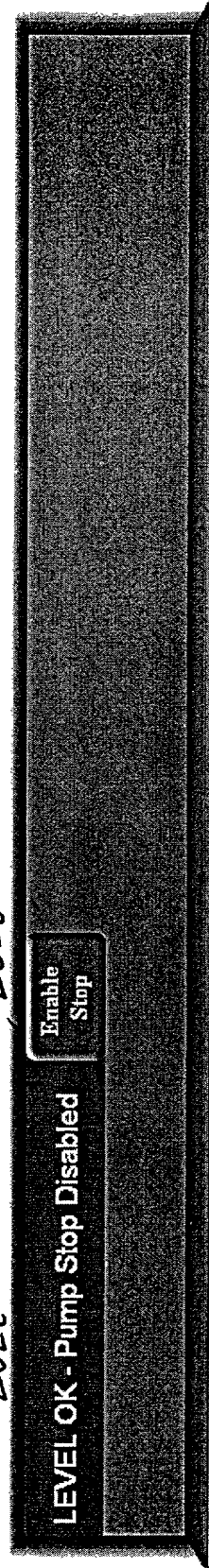
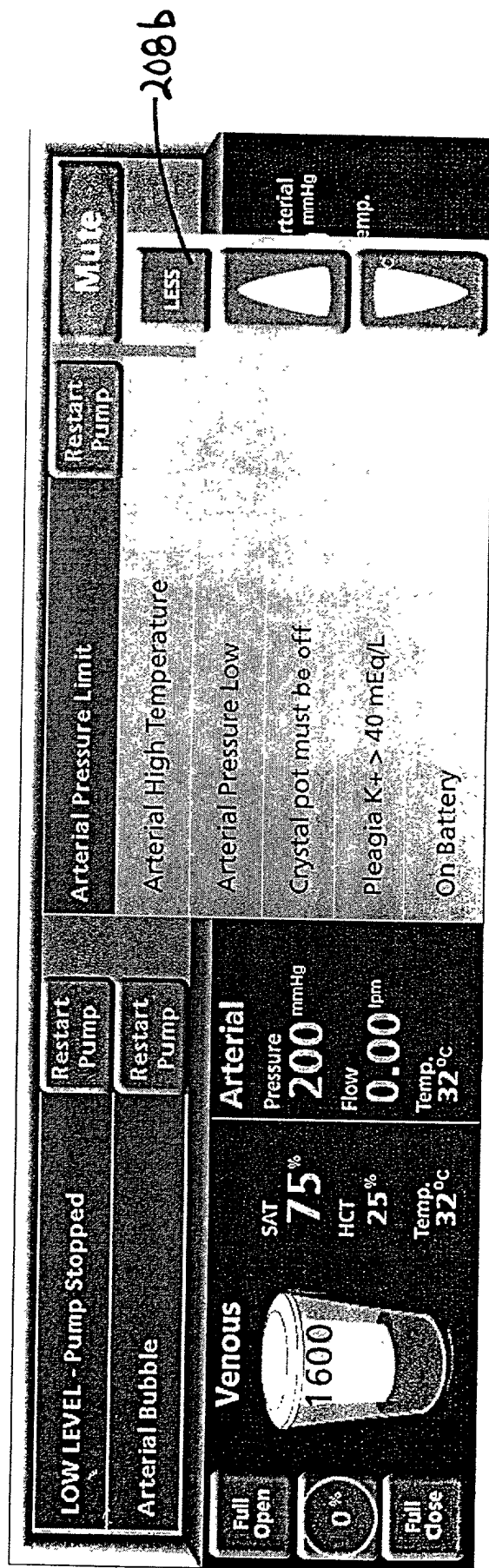
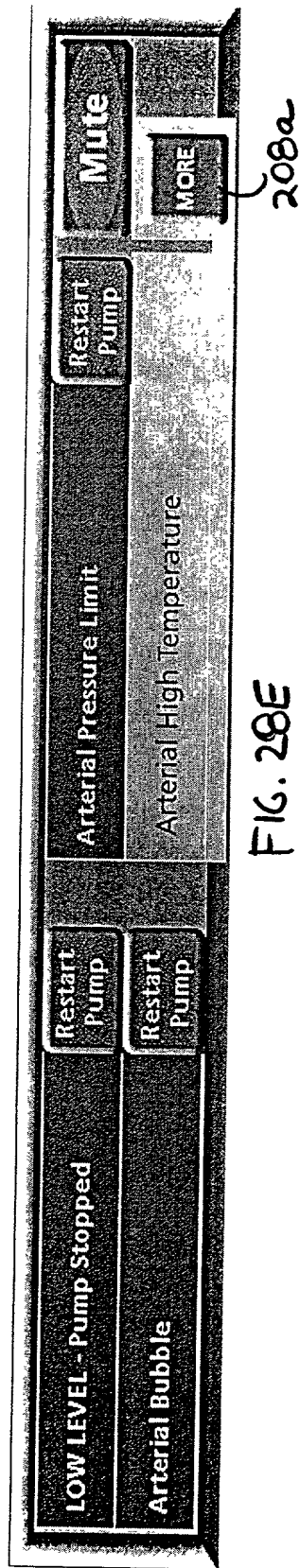
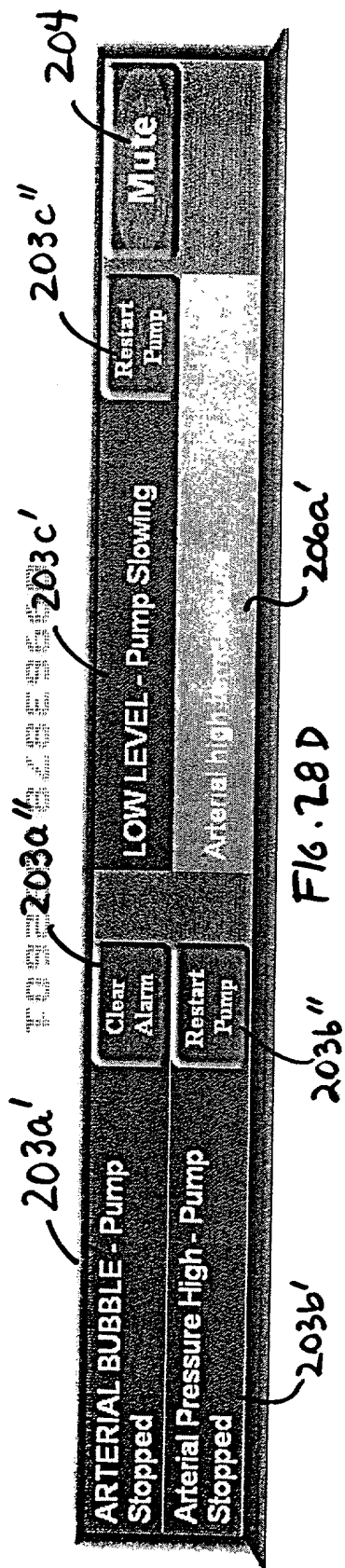





FIG. 28C



222 224 226 228 230

222		224		226		228		230	
Venous		Arterial		Cardioplegia		Blender		Other	
VIC FULL Open		Line Pressure		Line Pressure		Flow		Patient Arterial	
SAT 85%		151 mmHg		69 mmHg (Antegrade)		3.2 lpm		110 mmHg	
HCT 26%		Flow 3.81 lpm		Flow 0.276 lpm		FIO ₂ 50%		Patient Temp. 32.0°C	
Temp. 21.3°C		Temp. 21.0°C		Temp. 20.9°C		FiCO ₂ 0%		FeCO ₂ 1%	
VIC FULL Close									
222a		222b		222c				8:55	
									

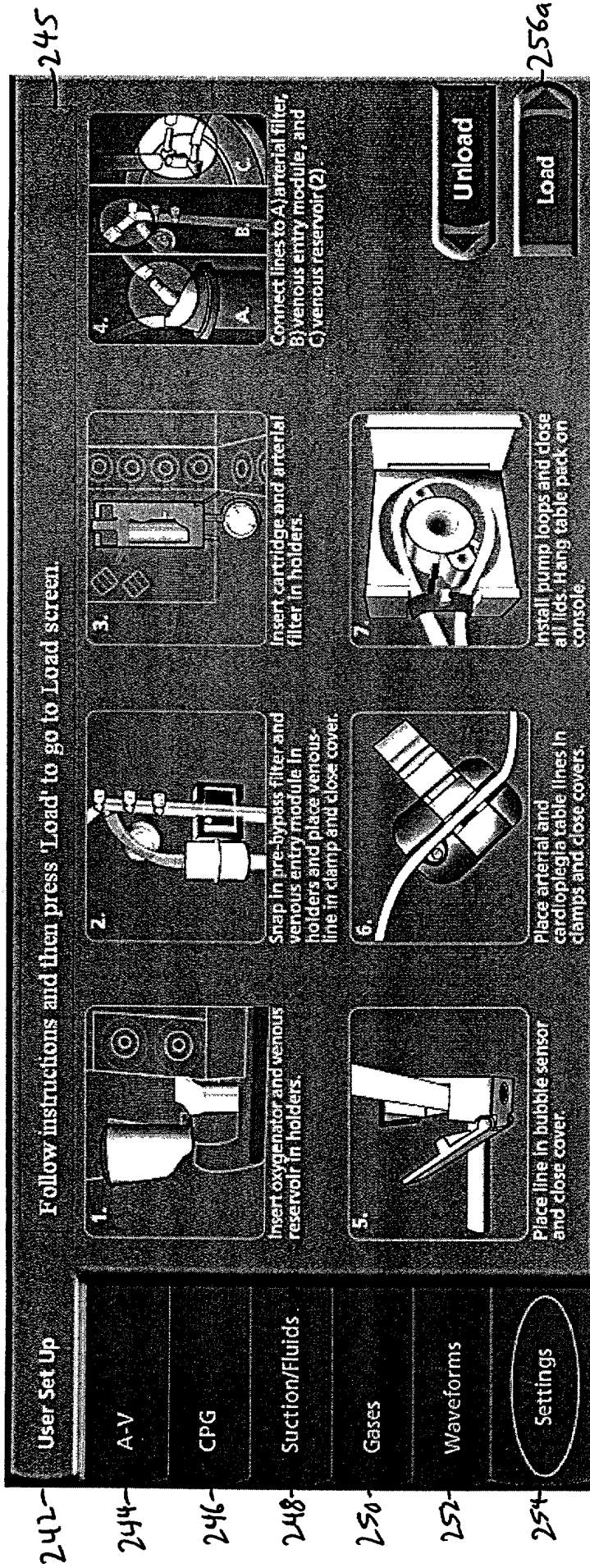
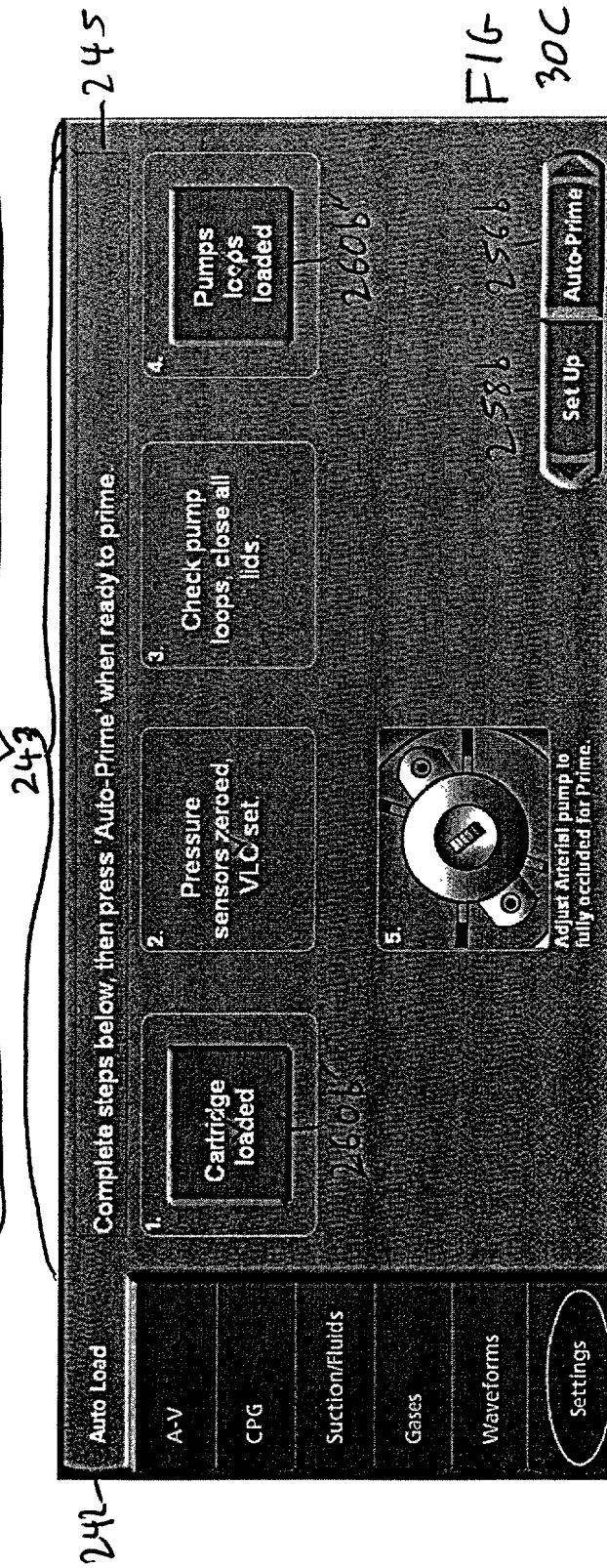
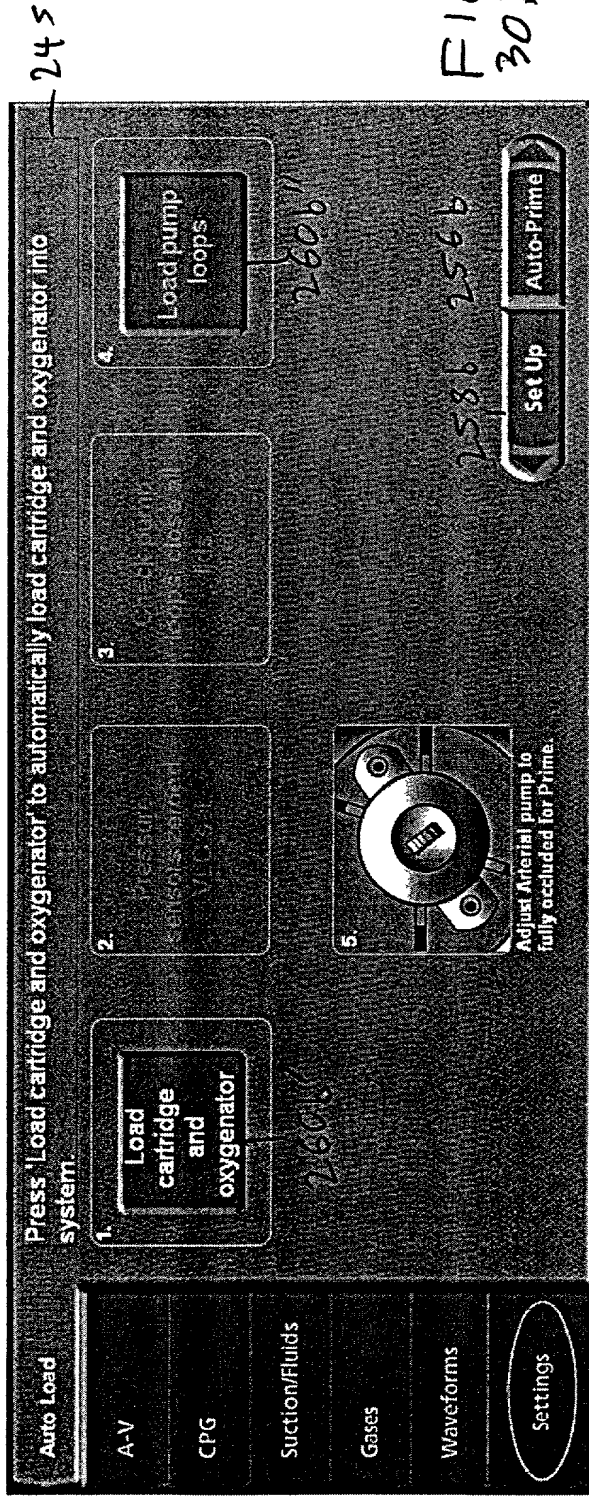


FIG. 30A



242-

245

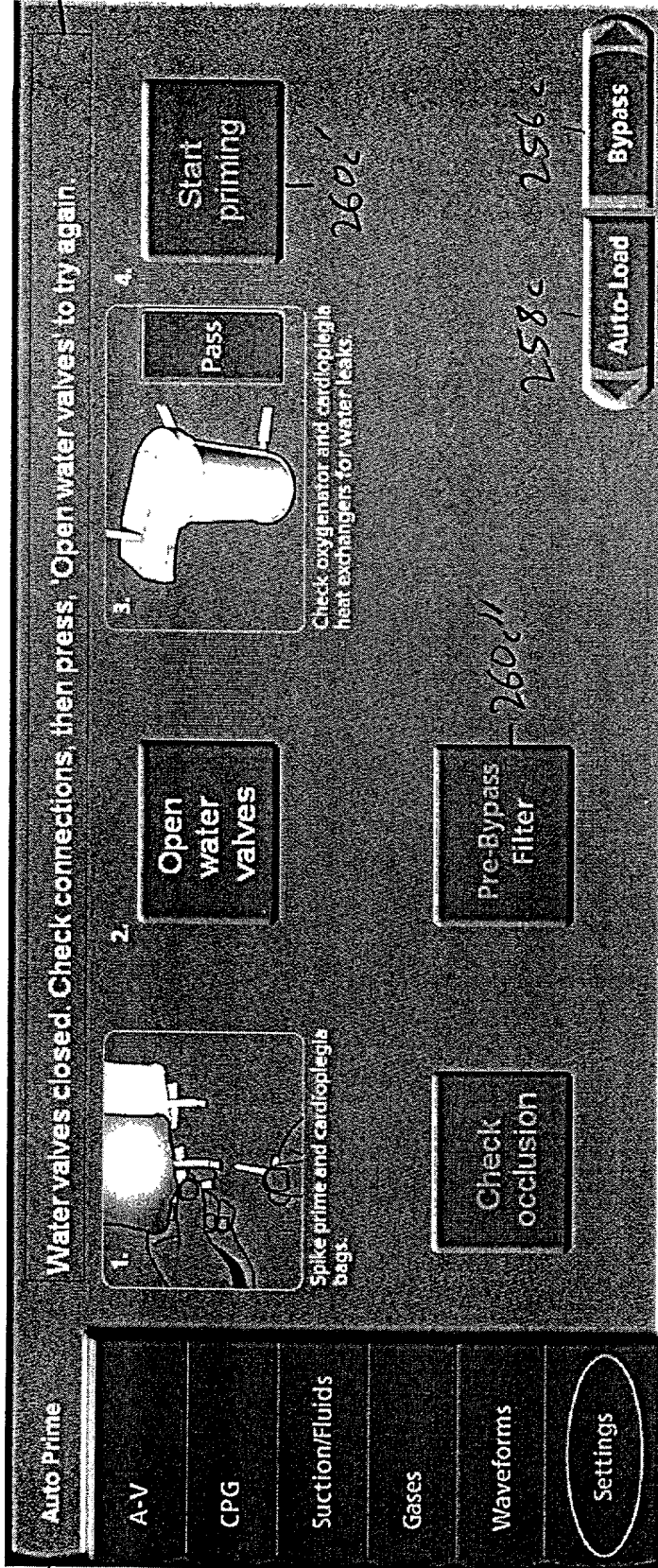


FIG. 30D

242-

245

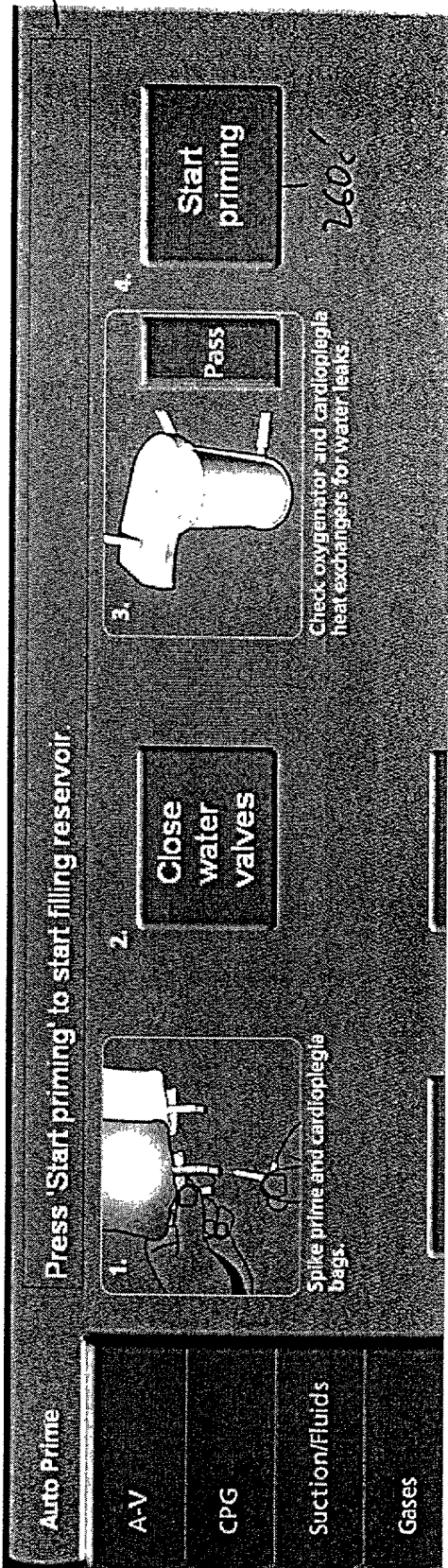


FIG. 30E

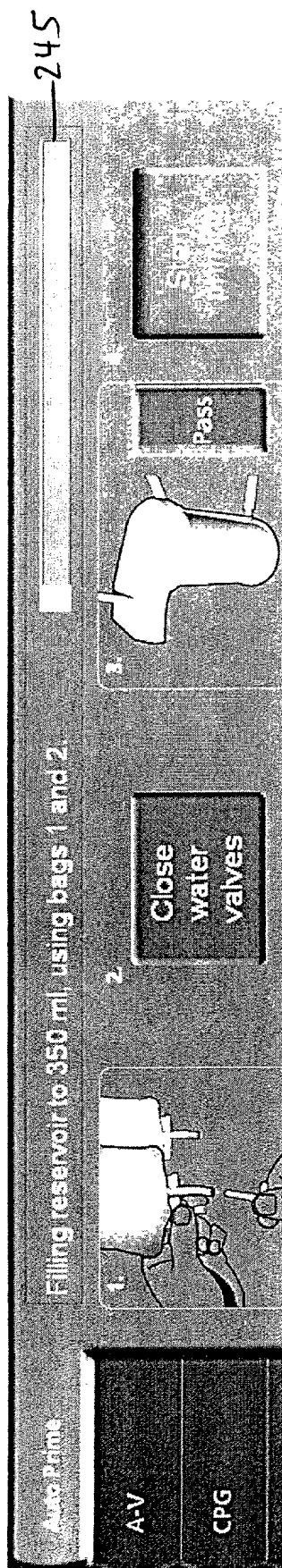
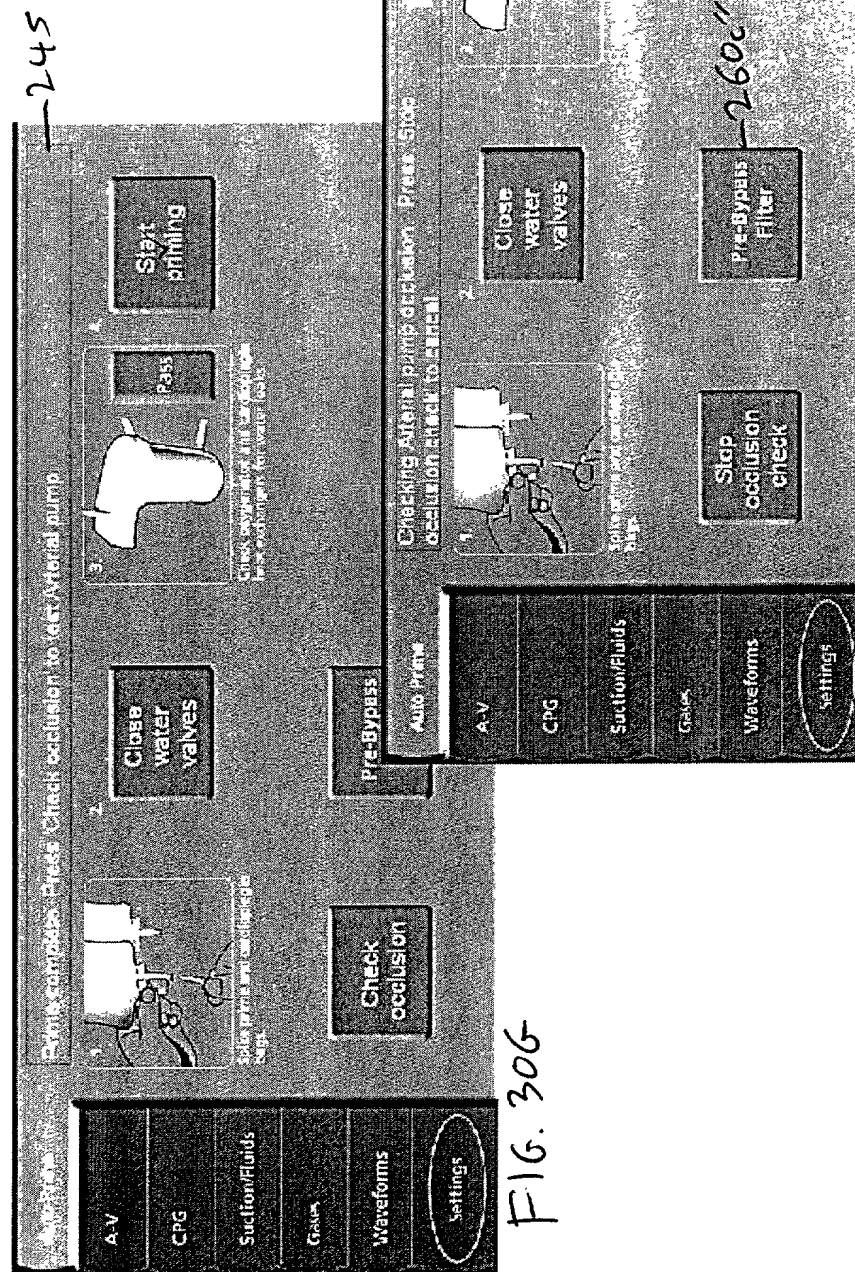


FIG. 30F



F16.306

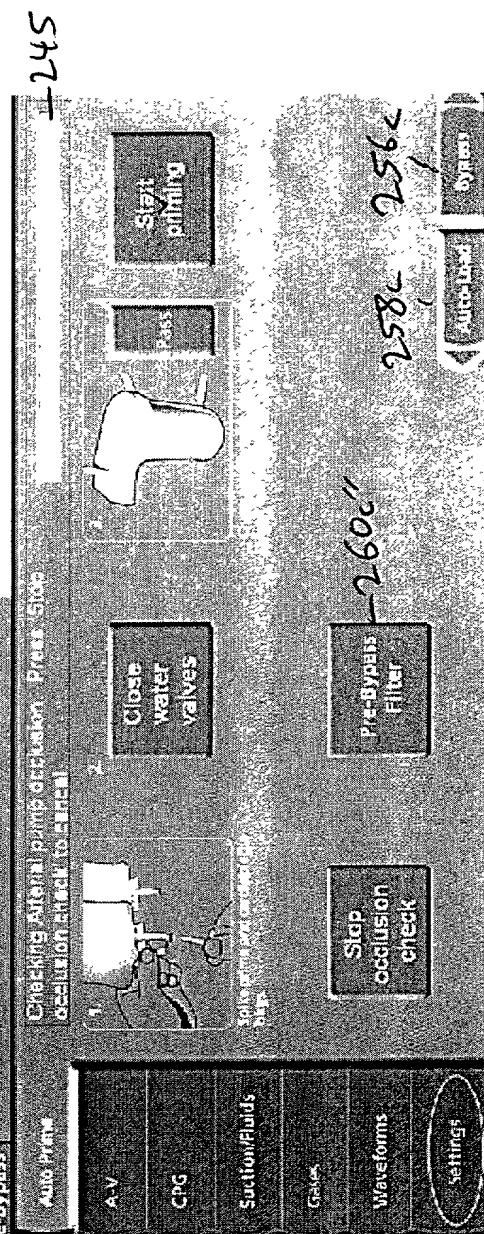
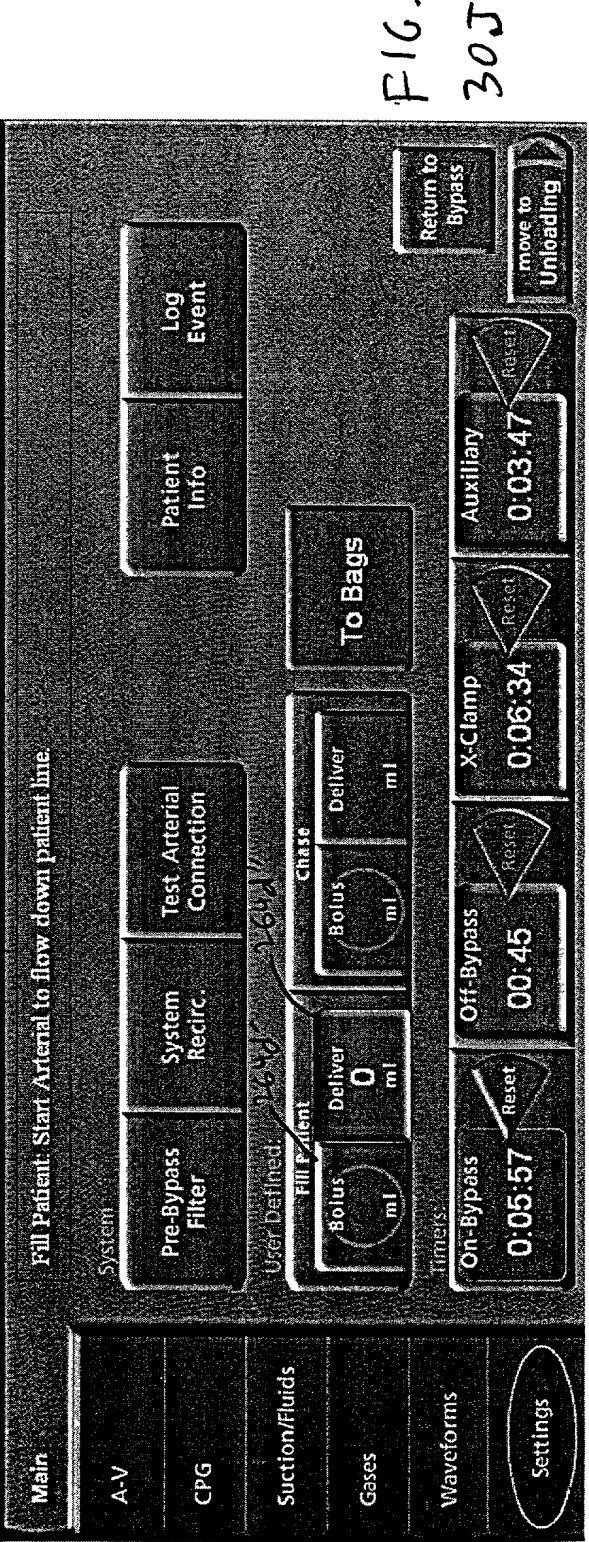
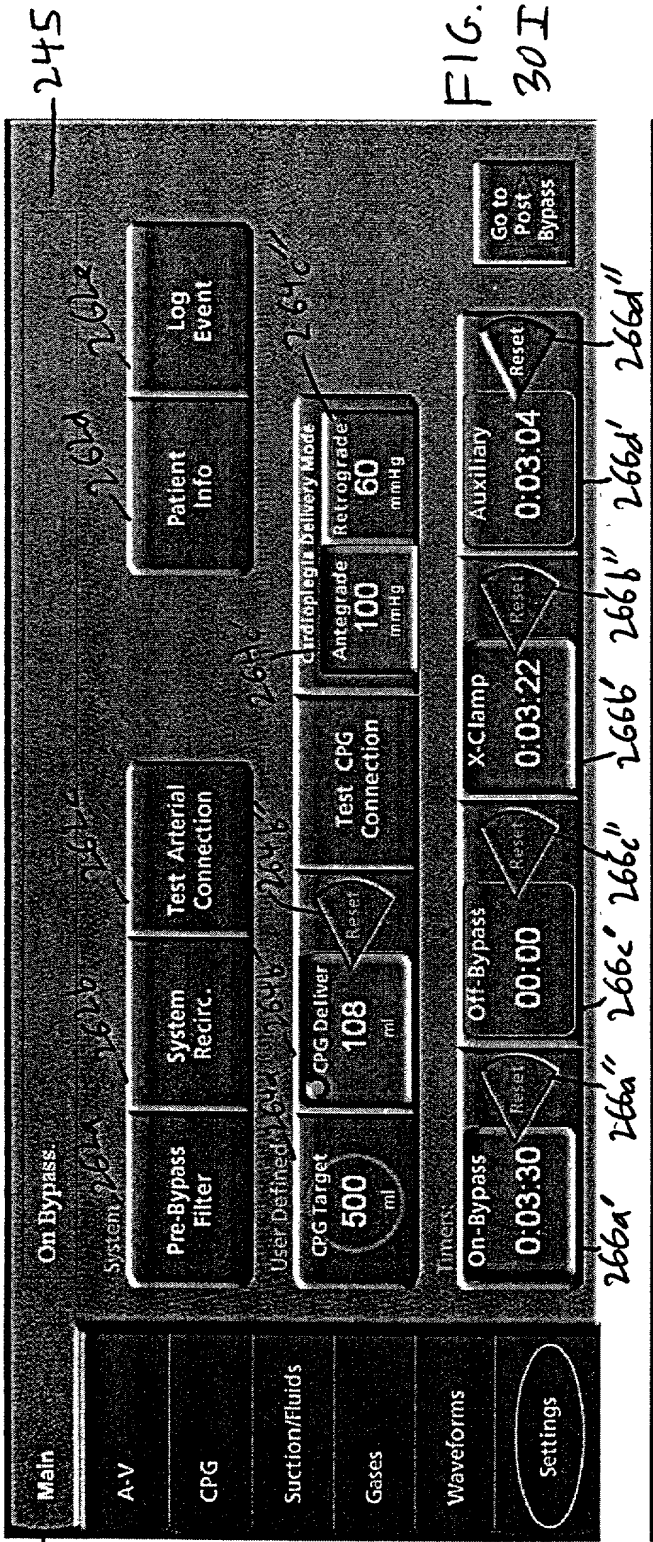


FIG. 30H

FIG. 30I



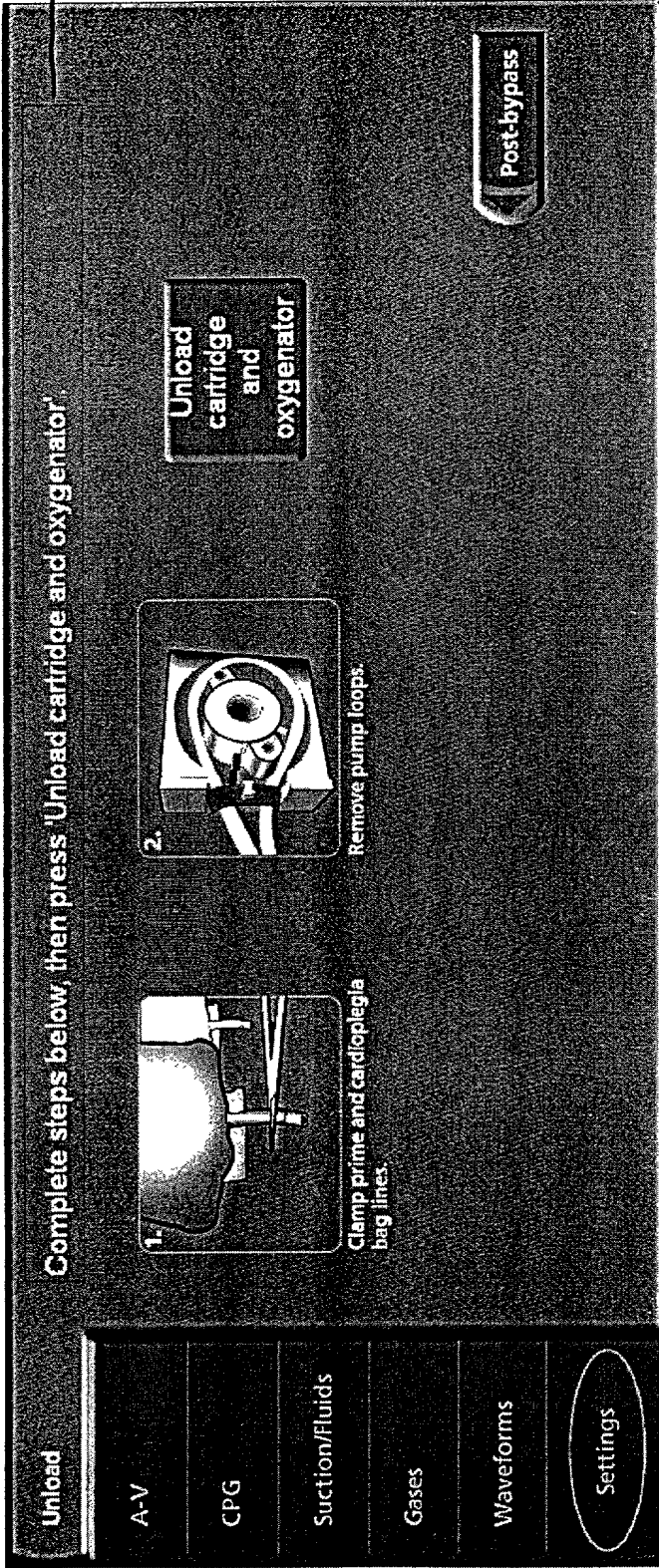


FIG. 30K

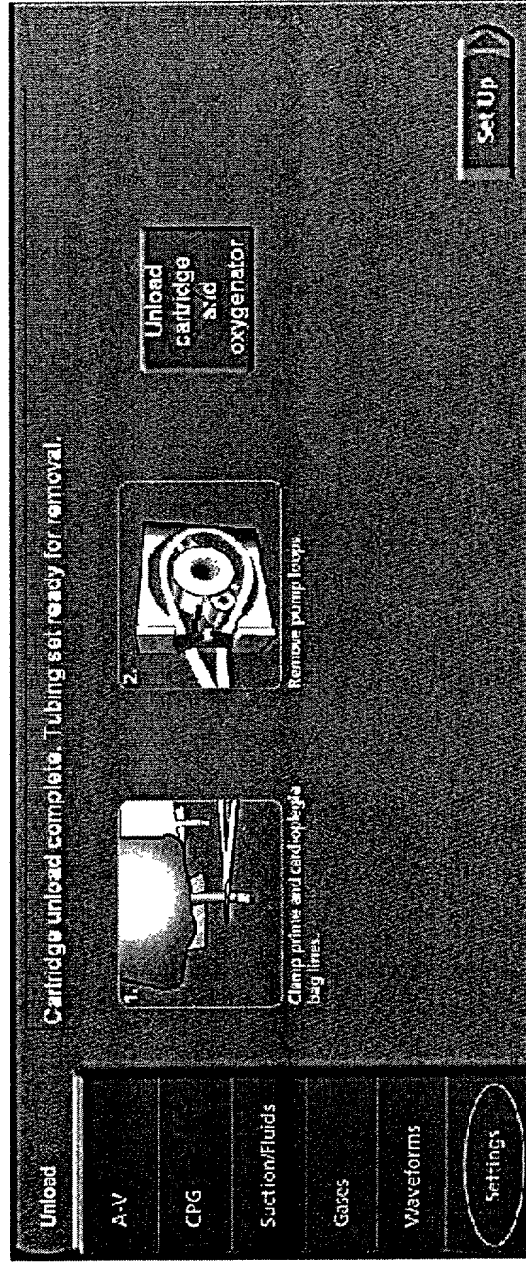


FIG. 30L

243

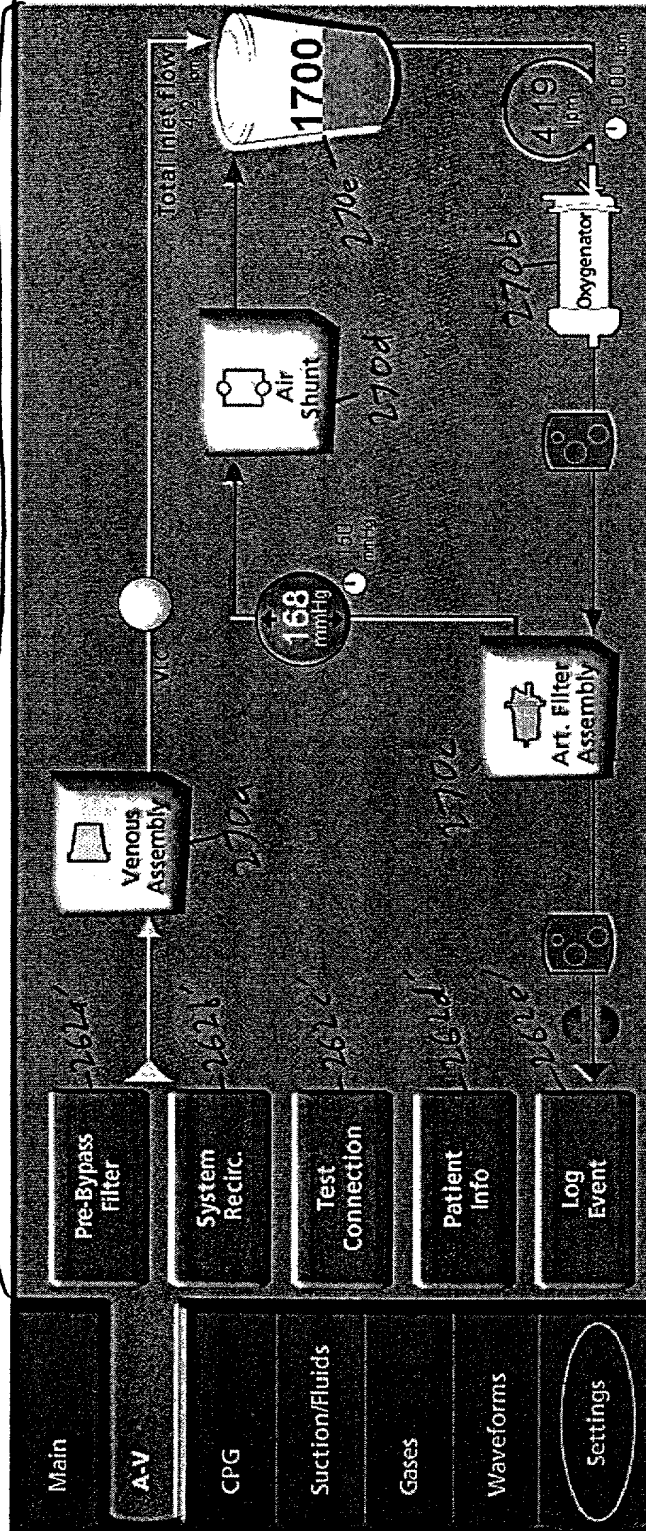


FIG 31A

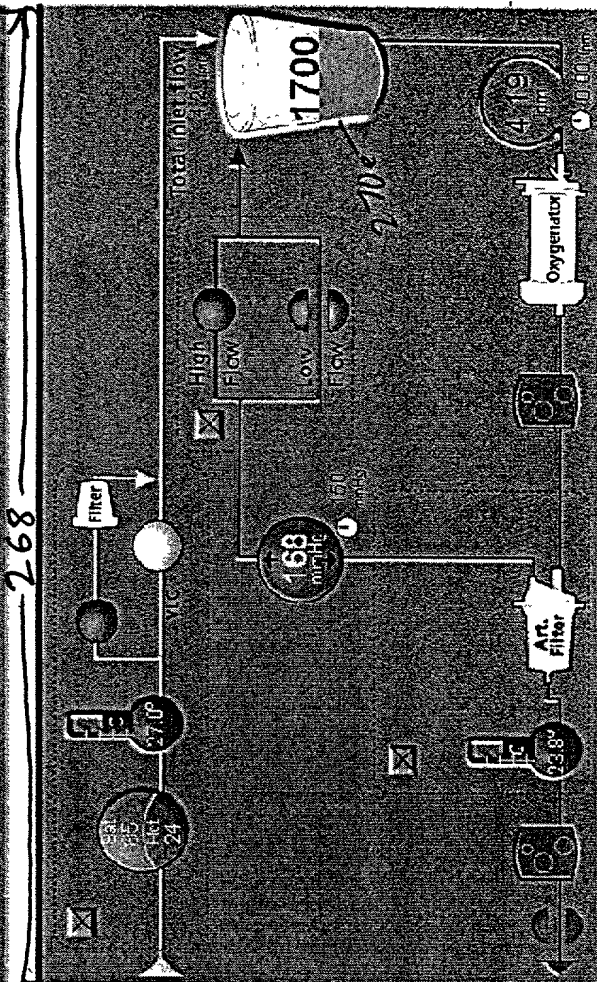


FIG. 31B

272

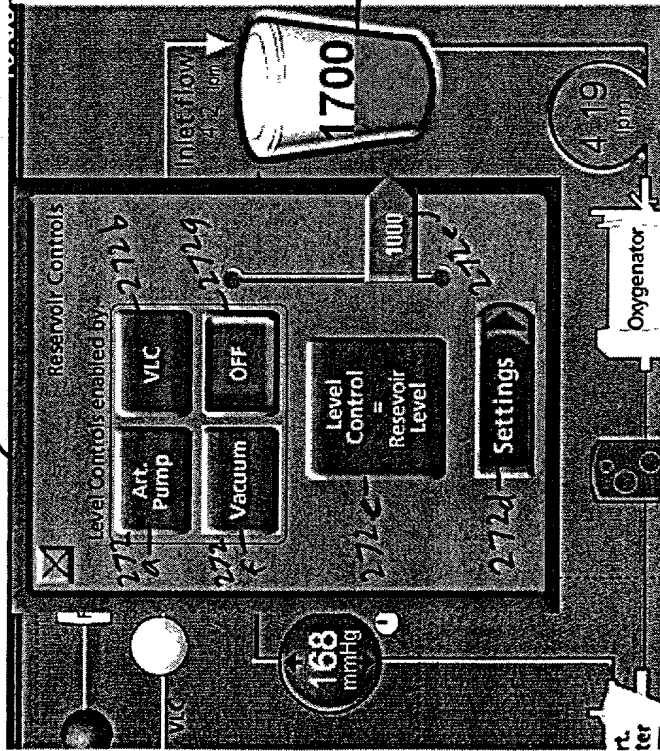


FIG. 31C

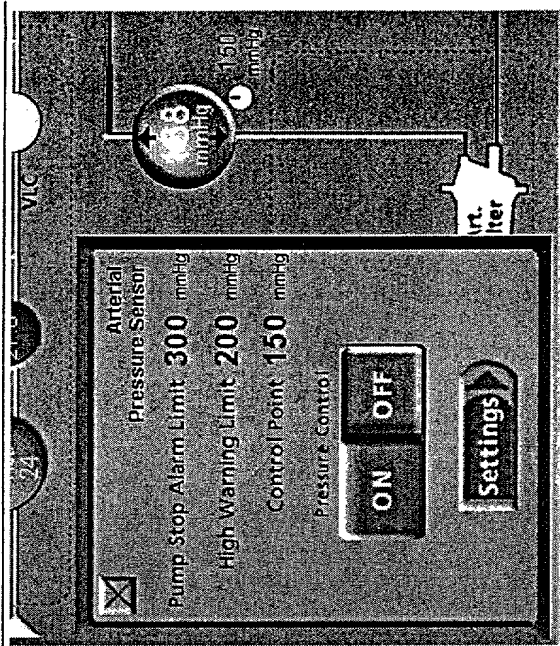


FIG. 31D

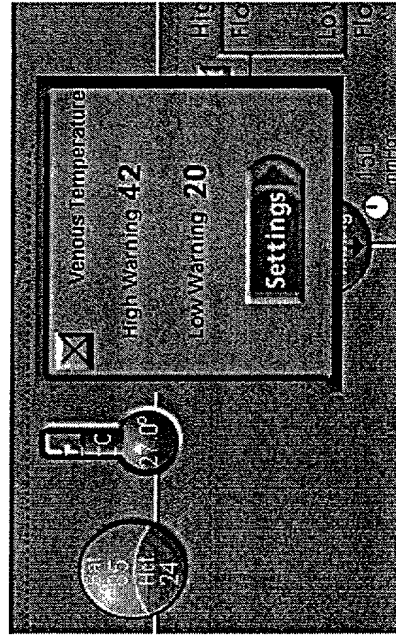


FIG. 31E

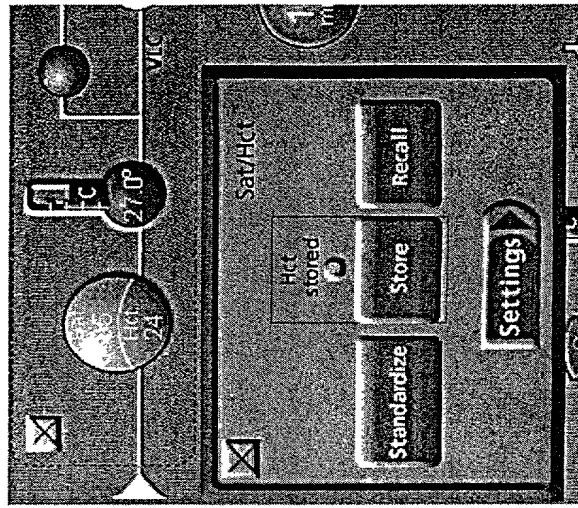


FIG. 31F

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268

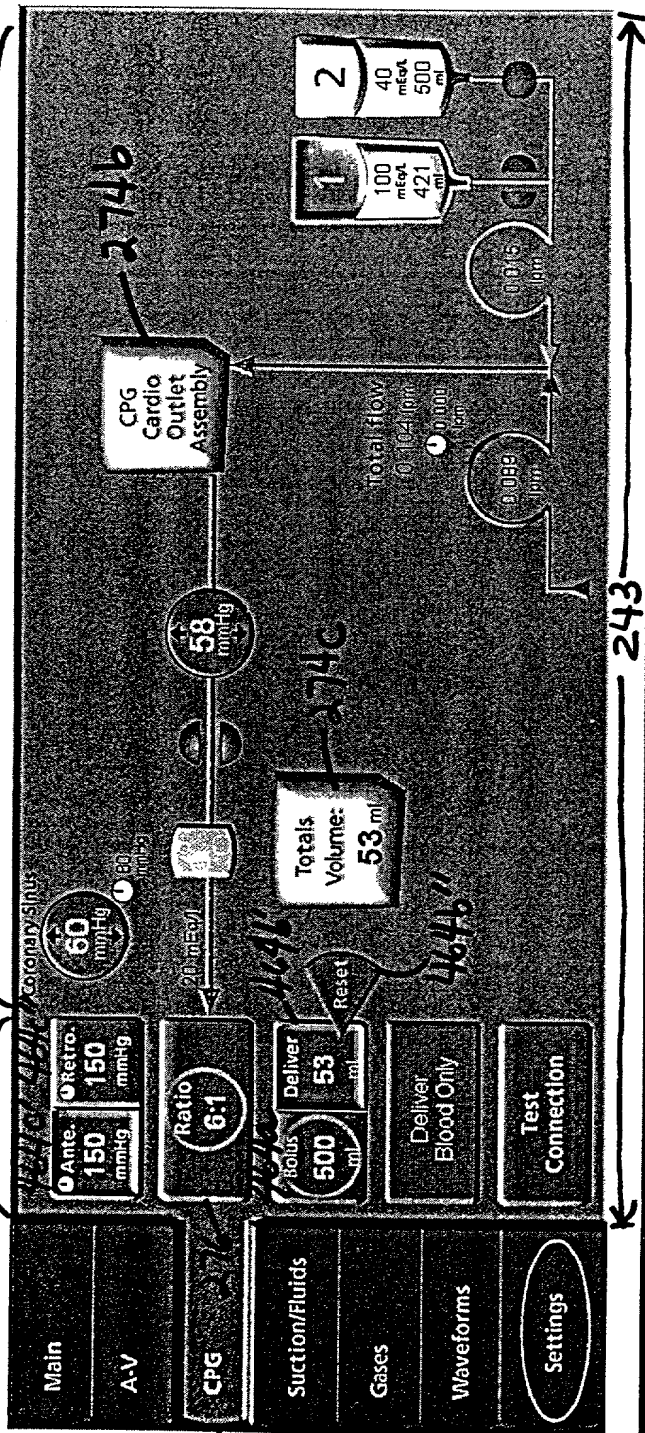
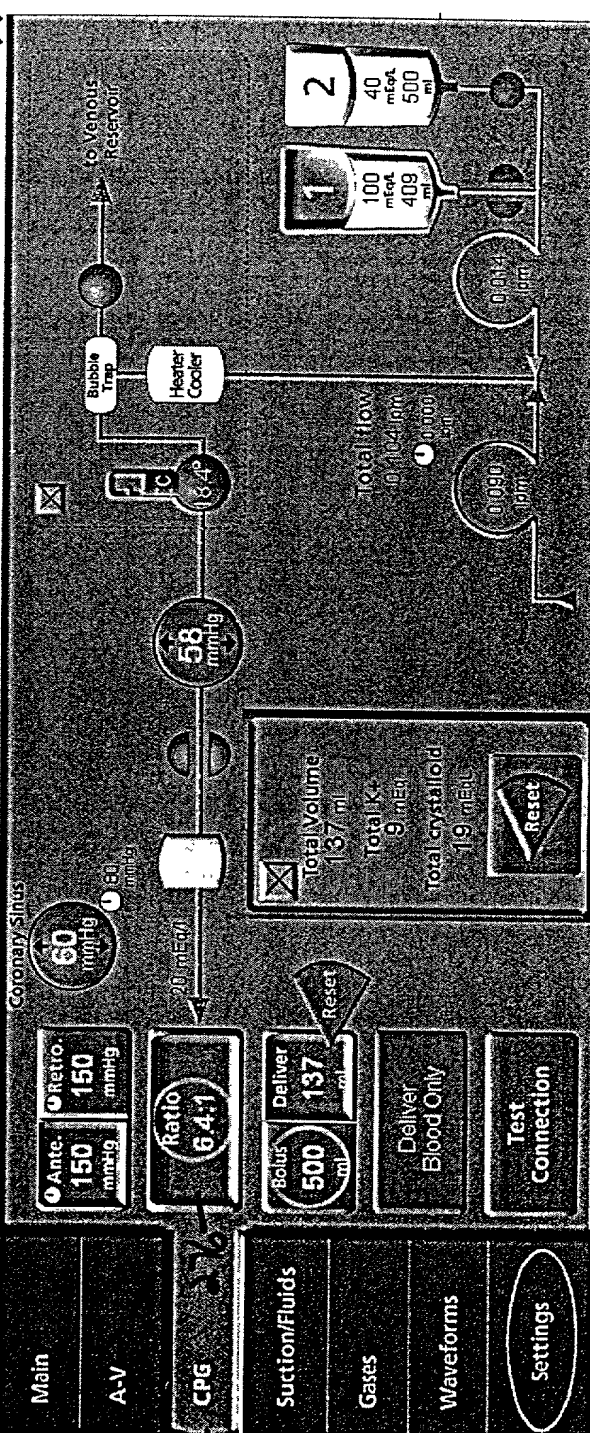
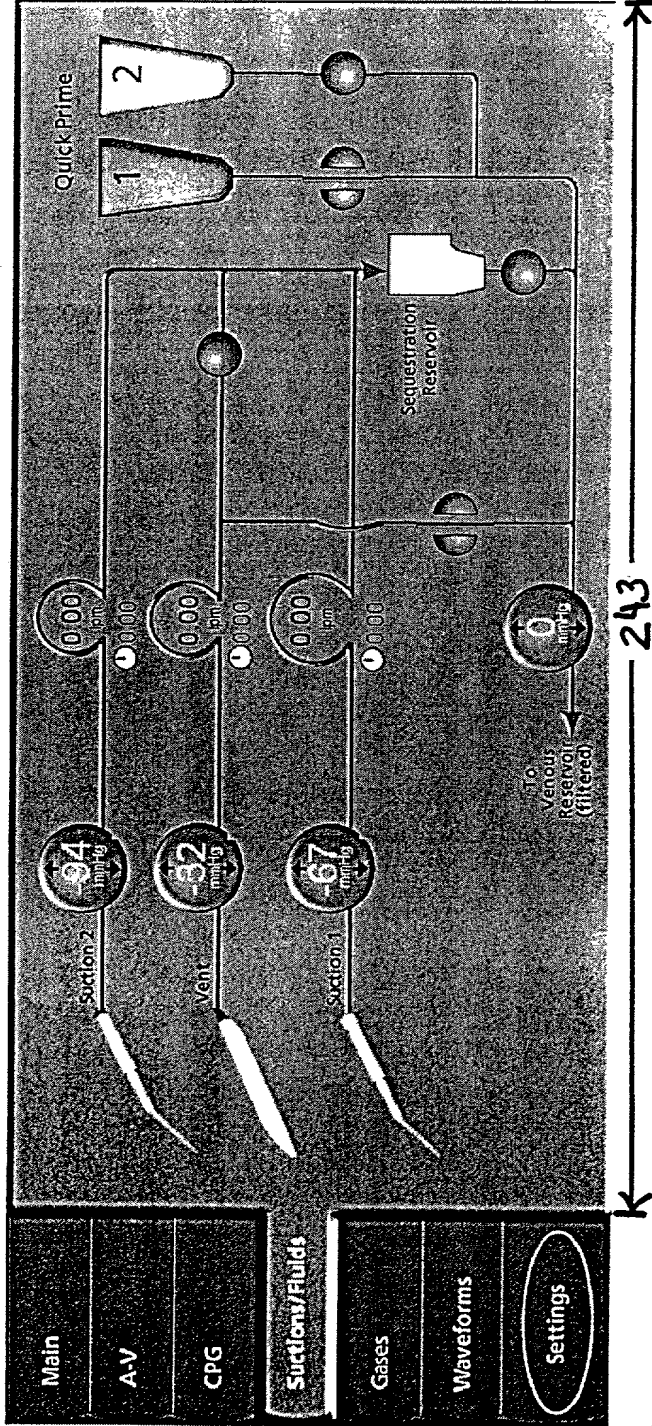


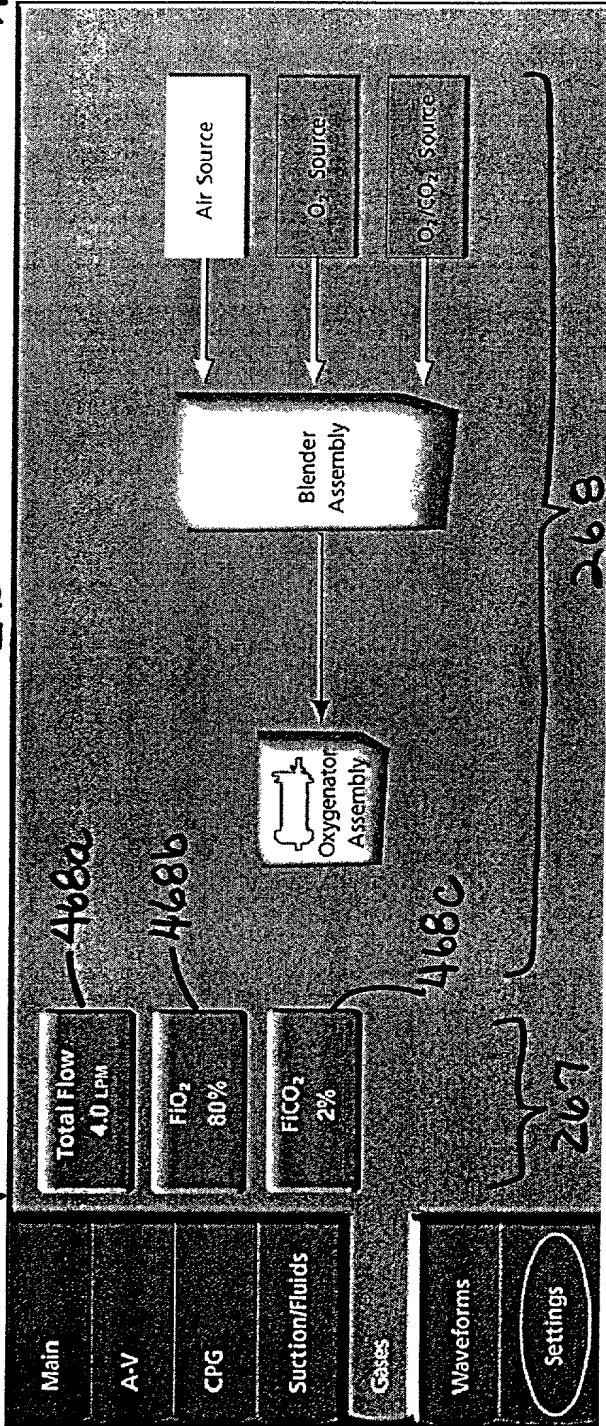
FIG. 32B





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FIG. 32C

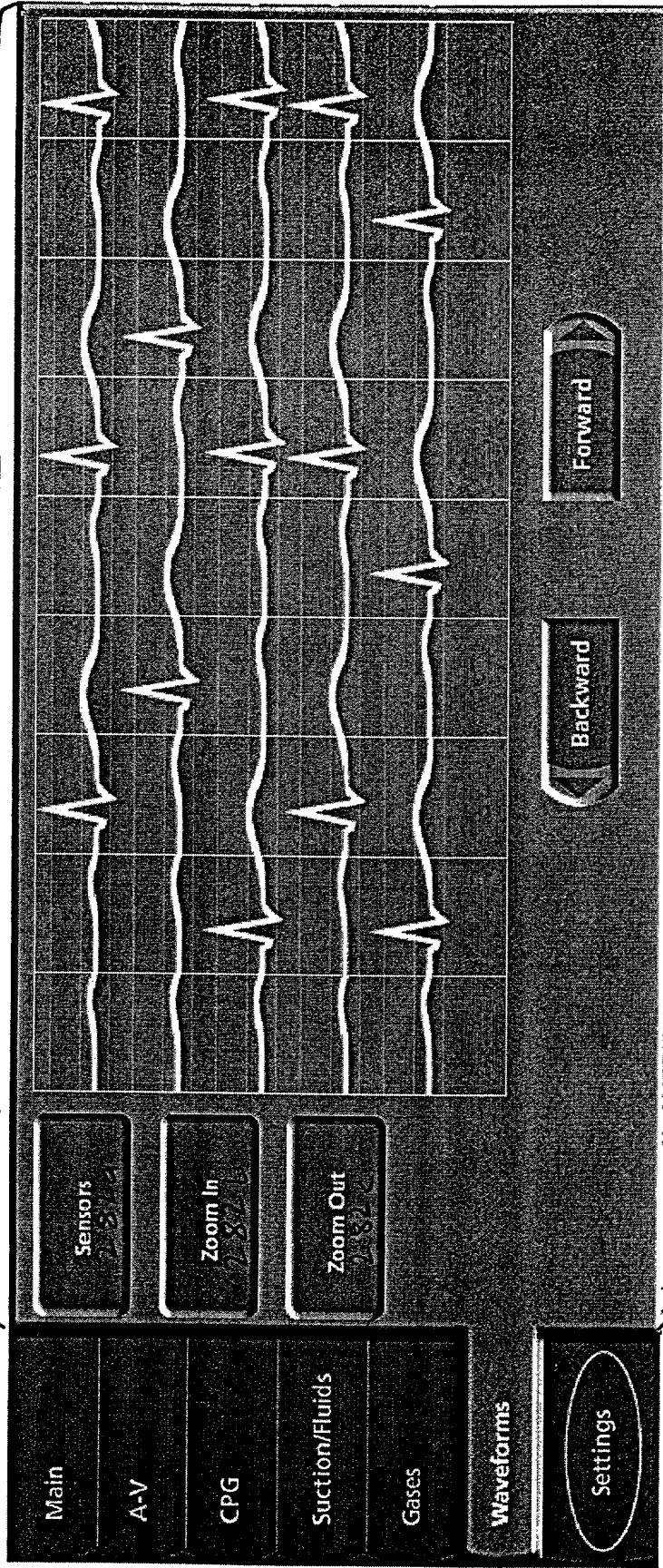


250

FIG. 32D

267

268



252

243

FIG. 32E

FIG. 33D

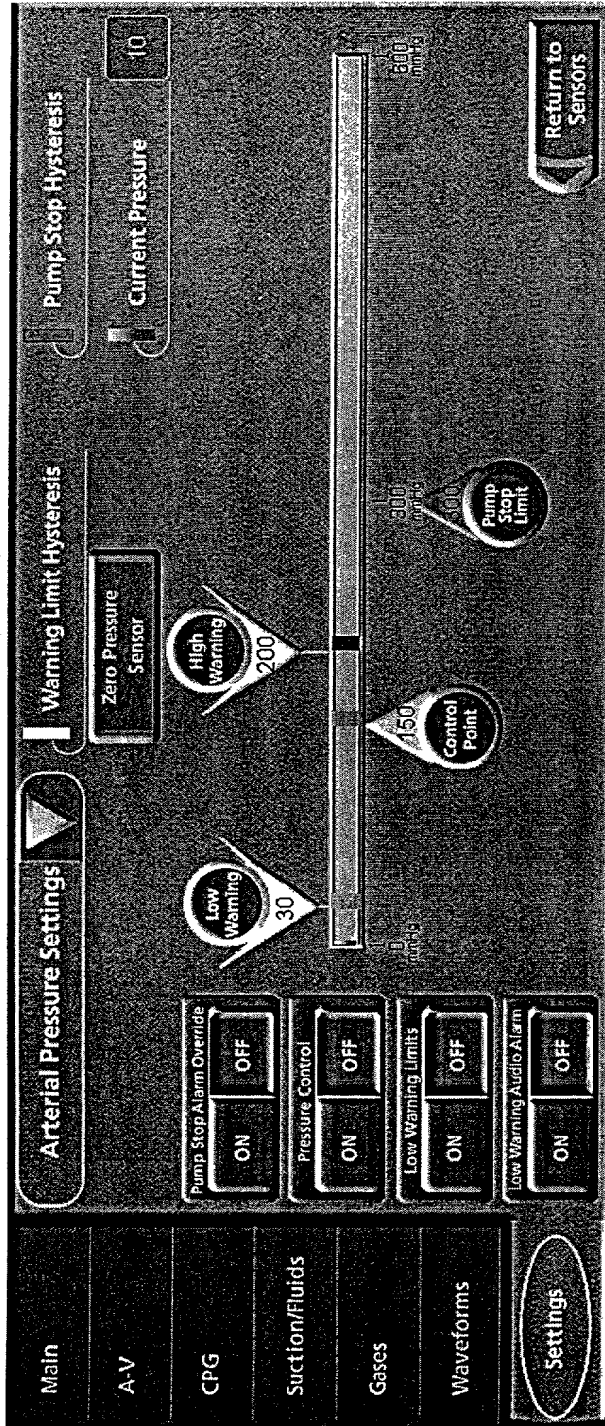
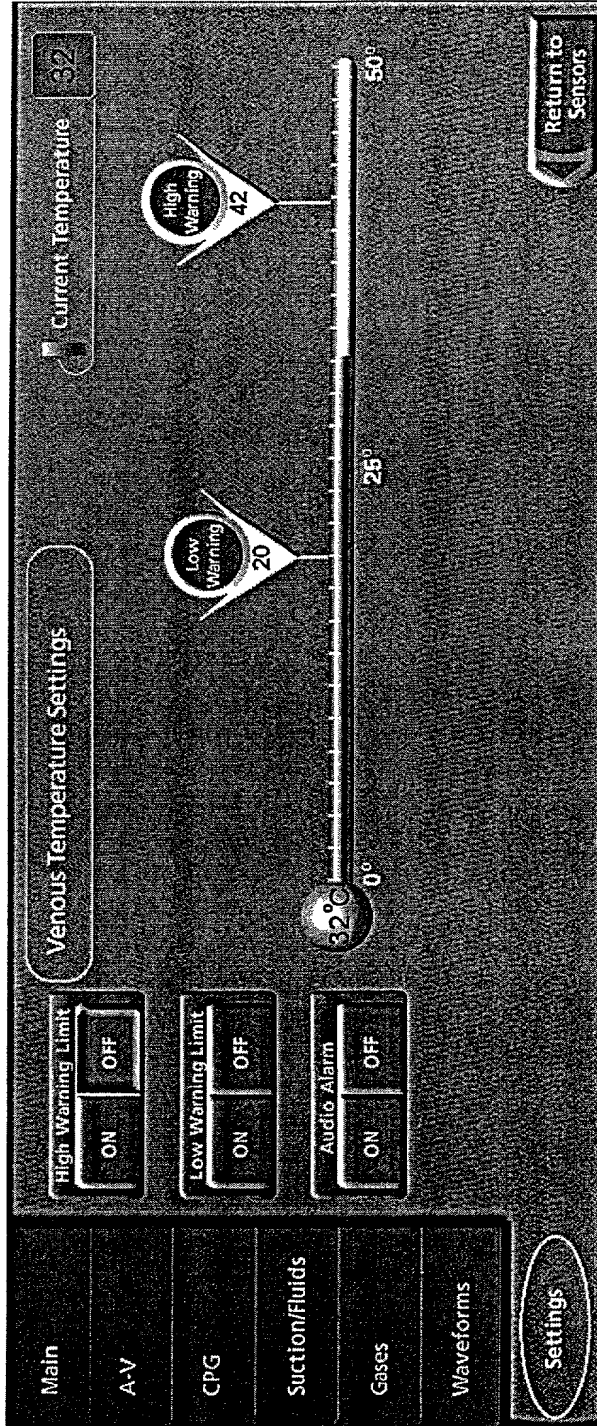


FIG. 33E



Main	Protocol				Sensors		CPG		Timers		Pulse		Other	
A-V	Bag Low Warning Alarm ON OFF				Select & Modify Bag Presets Bag 1 Bag 2		Preset 1 Preset 2 500 ml 100 mEq/L 500 ml 100 mEq/L		Preset 3 Preset 4 500 ml 100 mEq/L 500 ml 100 mEq/L		Modify Modify			
CPG	Bag Low Audio Alarm ON OFF													
Suction/Fluids	Bag Empty Pump Stop ON OFF													
Gases	K+ High Warning Alarm ON OFF													
Waveforms	K+ High Audio Alarm ON OFF													
Settings														
Configure Bolus					Mode Volume					Bolus Count				
					500					Up Down				
Select Delivery					Select Bag From Which To Deliver 1 2					Antegrade Retrograde Crystalloid only Blood/Crystalloid				

FIG. 33F